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THE LIVING TOUCH IN MUSIC AND EDUCATION

A Manual for Musicians and Others

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BY

H. ERNEST HUNT

Author of *Spirit and Music*, *Points on Practising*, etc.

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FOREWORD

THESE chapters contain the subject matter of a year's course of thirty lectures which have now, for several years past, been given in connection with the Training School for Music Teachers, London, W.1.

In order to incorporate the lectures complete it has been necessary to traverse part of the ground covered in some of the author's earlier books—notably *Self Training*—but the treatment here is new.

It is hoped that these pages may be not without interest to those who are engaged in teaching subjects other than music, for endeavour has been made to reach basic principles.

Furthermore, the intention throughout (however inadequate the fulfilment) has been to stress the importance of the general " seeking after the unknown God " in the especial realm of teaching.

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CHAPTER I

THE TRAINING OF MUSIC TEACHERS

NEW days demand new methods, and this applies at least as much to the teaching of Music and Art generally as to the more prosaic occupations of life. We are living in a period of transition, even it may truly be said in the midst of a revolution, and it is only because we are so very much part and parcel of the whole process that we are unable to see it in its true proportions. This revolution has already overthrown the old landmarks, and the new ones that are to take their place are as yet by no means clear to the vision. But there is already a sense of growth and expansion, a readiness to test and prove new methods, and a dawning realization that nothing can remain still without incurring the danger of becoming stagnant. The Art of teaching certainly shares in this ferment, and out of it promises to arise a greater conception of the aim of Music, and a finer realization of the privilege and responsibility of those who essay to teach it. Hence to-day the importance of the training of teachers.

It is necessary here to make passing mention of a point with which we must deal more fully later on. In all work and study the question of motive is of paramount importance. No life can be well lived without a motive, any more than a motor car can run without

petrol; neither can any study be effectively pursued in the absence of an ideal to act as a driving force. When a teacher decides to undergo training it should be with a perfectly definite object in view; that object may be in general terms to "keep abreast of the times and in touch with new ideas," which is excellent as far as it goes. But beyond this, the ideal is to fit oneself to teach better, and to give better service to those who look to the teacher for guidance and direction. This ideal of service-for-others is the one thing that must ever be before the teacher; for often enough the lesser aim of self-development or personal progress will fail to carry us through the heavy places, when the necessary extra ounce of effort will be willingly forthcoming for the sake of others. "Self" in any shape, as a motive, will surely in time wear thin, but "service" will strengthen with the passing of the years.

It is clearly necessary that we should study mind, for it is the raw material with which we have to work. Teachers are first and foremost teachers of mind, and only in a secondary sense the teachers of special subjects. We do not teach merely Music or Mathematics, but rather we train the developing mind through their means. This is a distinction with a profound difference, for the teacher who has simply imparted a certain amount of Musical or Mathematical understanding or technique alone, has certainly failed as a teacher and an educator. Whatever subjects may be studied it is surely with the one aim of making life a finer thing for the student, and of bringing into play and development the latent powers that are waiting to be led into expression and growth. We are not upon this earth

for any haphazard aim; Nature has been at great pains with an evolutionary process extending over uncounted millions of years, as the result of which she has produced the human race with all its capacity of spiritual expression and its nobility. We receive the result of this as our birthright, but coupled with this is the responsibility laid upon as to carry on the process. We are links in the long chain and we must bear our share of its burden, and be true to the trust that is laid upon us. Nature's fiat is "Progress," and to that progress Music, Mathematics, and all other subjects must contribute, ministering to the greater growth of spiritual expression and nobility, or else becoming sterile and missing the mark.

It is sometimes advanced that the training of teachers is unnecessary, since teachers are born and not made. This statement is, however, at once true and untrue. We are born with aptitudes, but training is always necessary to turn these aptitudes to faculties. Even the genius must needs develop his technique of expression, in whatever line he may excel; he must learn the rudiments of his art, walking first that he may fly later. The "born" teacher has, maybe, an excellent inherited equipment, and for this the high Gods may assuredly be thanked, but it will nevertheless be necessary for him to learn to turn his natural ability into channels that will secure the desired result.

Again, we are told that "teachers can get all they require by their experience"; but this is not true. Of our own personal experience we can of course learn much; so can we by the study of a geranium, but no one suggests that we can thereby learn the whole of

Botany. Old Roger Ascham, that great schoolmaster, somewhere remarks that "learning teacheth more in one year than experience doth in twenty"; and he is right, for by learning we come in contact with experience that is world-wide and time-wide. Moreover, those teachers who learn by their experience gain their knowledge at the expense of those whom they essay to teach; they may indeed learn by the mistakes they make, but what of the pupils who have suffered under those mistakes? In teaching, the case is different from that which prevails in other directions; when we study harmony we make our mistakes on paper, and then we throw the paper away, for it has served its purpose. But when we make mistakes in teaching we cannot scrap the pupil; our material is too precious to be made the subject of gratuitous experiment. If by due learning such mistakes can be avoided, then it is the bounden duty of the teacher to learn to avoid them; and if certain methods have been tried and proved to be advantageous, it is equally the duty of the teacher to utilize these. Hence the study of the mind is in both these directions of the utmost value.

It will at once be admitted that Psychology itself, or the study of the mind, cannot alone make a teacher, for there are many other qualities that are supremely essential; but it is a vast help. Firstly, the knowledge of the processes of mind enables the teacher to understand something of what is going on in his own mind, showing him something also of the latent capacities that he may develop in himself; and secondly, knowing himself, it enables him the better to understand the pupil. Of the other qualities that are essential for a

teacher we would enumerate, patience, sympathy, and insight, as each of them coming before the actual technical equipment of knowledge. The duty of the teacher being to train minds and to lead latent powers into expression, patience, sympathy, and insight are prime qualities without which, for teaching purposes, knowledge would be of scant use.

The obvious difficulty in the study of mind is that mind is invisible ; we can never see its processes actually at work, we can only infer what is happening inside from the outward indications. Thus the teacher must ever be studying the pupil with the greatest closeness, and the true teacher never stops learning. Every pupil is unique, presenting his own peculiar problems for study and solution, and with the knowledge gained from the study of one pupil the teacher is better equipped to deal with the next. No teacher can stay still ; either he is making progress and learning with each lesson he gives, or else he is growing stiff and rigid with the stiffness of approaching educational death. The teacher may also be well assured that the pupils on their part are certainly studying him, and very closely too ; and his methods and manners are being appraised with that keen perception which is the prerogative of the young.

The mind is behind every act, every mannerism, every success and every failure, and it is well to seek the causes that have led to the outer result. Without some knowledge of the machinery of mind this is well-nigh impossible, for frequently the causes are quite obscure. For example, the voice that is hard and unsympathetic may be simply a reflex of similar traits in the mind ;

and such a voice can only be properly trained by the softening of the character. This can only be accomplished if the teacher realizes his true function as an educator. Angular movements again betray a corresponding angularity of mind, and when the character is more rounded the movements will be more graceful. But further, there is ever a reflex action from mind to body, and the training in grace of gesture will assist to round out the angularities of mind. Thus teaching at once takes on a larger aim.

Music, if it is to reach its rightful place, must not be a mere matter of scales and pieces, studies and technique, it must rather be an essential element in life itself. Everything in the wide world is vibrant, from the atom to the stars in the heavens, and the essence of every sound is vibration. Regularity and rhythm make for happiness and ease whether in music or in the human body. The harmonious expression of the spirit of life is the aim of all creation and where can that harmony be better illustrated and initiated than by the study of music? We shall show more clearly later the very definite ways in which the influence of Art is felt in the everyday life, but for the moment we hope to have made it clear that this larger view of teaching is one worthy of the greatest consideration, in that it offers promise of high and noble result.

CHAPTER II

THE DUALITY OF MIND

VERY little consideration of the subject of Mind assures us of its dual action ; there are things that we do of set intention and attention, and there are others automatic. We sit down at the instrument to play, and at once a whole series of very complex automatic adjustments comes into play. We have our attention on the music in front of us, but there are a dozen, a hundred, or maybe thousands of other things which are being done —and done effectually—without our conscious attention. This is what we mean by saying that there is a duality in the action of mind. That range of faculty which is controlled and directed by the Will we term Conscious, and for the sake of convenience we assign all other faculties to the Subconscious.

All education in the last issue is the education of this Subconscious, for while we have yet to direct and adjust the conscious processes, they have not become habitual, and therefore are not completely known. When they are truly known they are removed out of the realm of direction and debate into the care and control of the subconscious. We know that twice two are four without any question, because our education has so far progressed ; but while we have to discuss as to whether the product is three or five, we cannot be said

to KNOW our arithmetic. Thus we see that only as we pass our mental food through the gateway of the conscious, to be digested and assimilated in the subconscious, does our real education proceed.

These two functions of the mind are quite diverse in their operation and scope, and they are both necessary to its complete working. The conscious mind is the organ of the senses, through which come all the messages of the great outside world, and essentially it is active, continually at work bringing in fresh matter. The subconscious on the other hand is passive and receptive, it accepts this material and then sets to work to absorb and digest it. We do not mean that the subconscious is passive in the sense of being inert; on the contrary, it is the laboratory or workshop of mind where an extraordinary amount of constructive work is carried out, even though we know little of the process that is going on apace. The conscious processes are largely concerned with the intellect, the subconscious are more nearly related to the emotions. The former are positive, displaying mainly the male characteristics; the latter are negative, and allied more to the female nature. Thus the mind in its two modes of action displays something of the pattern that runs right through the whole economy of Nature.

We have instanced the way in which we do a hundred things automatically when we sit down at the piano, but in the same way all the day long we find our habits running in well-worn grooves and relieving us from the necessity of conscious thought. From the act of dressing in the morning to that of tumbling into bed at night our daily life is one long round of automatic action, so

much so that probably while the conscious attention is concerned with the carrying out of five things, the subconscious has attended to ninety-five. It is characteristic of this latter department of mind that what it does is done accurately and with ease, as witness the way in which we walk, talk and write. These are actually extremely complicated performances which have been learnt with laborious and conscious effort; now that the subconscious has taken them over we give no further heed to them. This is typical of our whole educational process; first the conscious effort, then the subconscious freedom from effort, and the ability to proceed to the conquering of further difficulties.

In the musical realm we notice that in this way the appreciation of rhythm has become subconscious, the normal harmonies are also registered, and there also in the subconscious we find our automatic appreciation and recognition of intervals. We may not be able to measure out accurately the stretch of an octave on a foot rule, because consciously we do not know it, yet the hand springs to it automatically on the pianoforte. We never realize perhaps the wonderful range of "ready-prepared reactions" in our mind; and yet when we sight-read, the printed symbol sets these reactions in motion—as one might pull the trigger and fire the pistol—and they pass into action with incredible speed and efficiency, all accomplished by the steady attention of the subconscious to its allotted duties.

Teaching should never be regarded as the active mind of the teacher working on the passive mind of the pupil; this is not a true picture. Both minds are

active, and while the teacher's mind is constant every pupil has a mind that is purely individual and unique. This uniqueness arises from considerations that are operative before birth. It is hardly possible, but it would be an undoubted advantage for a teacher to know the parents of every pupil and to have some idea of the family history. Many of the problems that confront the teacher cannot be solved without reference to these facts, and these unfortunately are not before him ; consequently he works only too often in the dark. To know the parents is frequently to excuse much in the child. In the inherited equipment of the child is that blend of characteristics which makes it unique, and renders it so necessary that the teacher should pay due regard to the natural bent.

The subconscious comes into the world with us, and in it and by it we inherit qualities and characteristics that play no small part in our life history. There are three main lines of influence working upon this subconscious before ever we are born ; and the first of these is what we might term the racial or evolutionary influence. We are born into an age, a climate, and a civilization, and from each of these we draw something that is appropriate to it, something with which we are dowered in spite of anything that we may do or say. A French baby is born French, and an English baby is born English ; they are not born neutral, each to take his tone from his environment. The wise teacher will not expect the same results from the one as from the other, or if he does he will not get them. Humanity to-day is the product of countless millions of years of upward evolutionary climb, and the history of this

climb is written both in our bodies and in our minds; we have vestigial relics of out-grown functions—third eye-lids, rudimentary tails, movable ears, and so forth —in our bodies. In our minds we have vestiges of past fears, of out-grown instincts and appetites, of pre-historic traits; and all these are part of the warp and woof of the marvellous fabric of mind, combining in wonderful ways to make us like everybody else in the elements of our inheritance, and yet unique in the individual blend.

The second influence is that of our immediate ancestry, our parents and grandparents and remoter relatives. It is said that "our inheritance is multiple, say one-fourth from each parent, one-eighth from each grandparent, one-sixteenth from each great-grandparent, and so on."—("What is Man?" J. A. Thomson.) In this way is provided the body, which is to be the instrument through which the soul may play its part in the symphony of life. Here is the nervous system with its potentialities of high-grade work, or its limitations that condemn it to lowlier tasks. Herein are the adaptations or otherwise that point the way to our future occupations and pursuits. Herein are we "born musicians" or not, as the case may be.

The third influence is that of the pre-natal period, the imprint of the maternal thinking during the nine months of gestation. Far more frequently than is supposed the future bent of the mind is here determined. The infinitely plastic material of the developing embryo receives impressions for weal or woe, and here are implanted the love of the arts of peace which may go to the making of the musician in the later years, or

the love of war which—as in the case of Naopleon—may go to the fashioning of the warrior or martial leader.

These three strands, then, are woven into the fabric of our being before we enter upon our separate existence in the world ; at once they give us our heritage that we share with the rest of our kith and kin, and yet with it they give us our specific individuality. They tie us to our past, but yet give promise for the future. They prevent us from breaking away from the norm of safety, yet point us the way to progress. As it is in the case of the individual, so it is with the nation, and with the race ; there is a collective Subconscious as well as an individual, and it is this that in the main keeps the race true to its traditions, and prevents too violent change in untried directions. The Subconscious gives us the conservative instinct, and in this aspect may be looked upon as a kind of inherited memory ; this does not actually stand in the way of progress, but it certainly regulates it, tends to keep it within limits, and to a certain extent slows it down. Thus we may understand that men are not born equal, but exceedingly variant ; that the treatment we accord to one must be varied in the case of another, because types differ ; and that, exactly in the same way with pupils, each must be treated as the unique individual that he truly is. This means that the teacher never ceases to learn from the ever-variant characters that come to him, and that his teaching can never become stereotyped. He must be adaptable, ever employing his ingenuity to meet the changing problems that present themselves to him with each new day.

CHAPTER III

DOMINANT IDEAS

We have shown that the subconscious possesses what may be termed an inherited memory, but as soon as the individual is born into the world he adds to this an acquired memory. We have strong grounds—indeed the very strongest—for supposing that this memory is perfect. We remember what happened this morning easily enough, but last week's happenings are more elusive, and last year's still more so. We might say that those of ten years ago were completely lost; and yet a little illness, accompanied by delirium, could quite possibly restore those "lost" memories, in incoherent fashion perhaps, but quite effectively enough to show that their record was still in mind. Dreams bring back our memories, mixing them in inconsequent order; and intoxication may do the same. In the case of the apparently drowned we have the recorded experiences of many who tell us of the "flashing" of all their past memories in the moment of crisis. Senility also seems to put the very old in touch with their childhood's memories, and these must therefore obviously be there. The general effect of these various considerations, as of many others, is to emphasize the fact that memory is perfect.

We are too apt to confuse memory with recollection, and to think that our inability to recall a thing is proof positive that it is lost to mind. On the contrary, all the evidence we possess points to the fact that once a thing has been a matter of conscious experience it has become a permanent part of the mind. All the events of the world-past have gone to make its history, and all the events of our mental past are combined in our mental history; this mental record is at once our memory and our character—a point to be emphasized later.

Psycho-analysis tells us that forgetting is simply the passing of an idea into the subconscious realm. Things drop out of consciousness because we cannot hold more than one thing right in the centre of our field of attention at one time, and sometimes because we have no desire to keep them. When things drop out naturally, it may be because we cannot hit on the line of association that will bring them back, or perhaps our minds are too badly organized. Untidy minds frequently forget, yet the required material is there, and the defect is in the organization of the mind. Quite likely the forgotten material will come back at some time when it is not required, but the organized mind can recall what it wants when it wants it. The refusal to allow an unpleasant impression to enter or remain in consciousness is known as repression; we then forget because we will not allow ourselves to remember. But again the forgetting is but fiction, for the "forgotten" idea is merely driven below the surface, becoming very often inconveniently active in the subconscious. It may influence our dreams, temper, nerves, or our physical

health ; but in any case it amply demonstrates that memory and not true forgetfulness is the fact.

We learn that the grey matter of the brain and the cell-stuff of the nervous system are plastic, that is to say they receive and retain impressions that are made upon them by the impact of a sense message or thought. The brain is not the same after the receipt of the message or thought, as it was before. The difference is subtle but certain. We talk about the memory " cells " of the brain, but we have no clear idea as to what we mean ; memory is certainly not contained in cells. All that we know is that an impression reaches us, and that in some subtle way it leaves a trace of its passing, and that this change, whatever it may be, is the means whereby we can restore the impression again to mind. We hear a melody, the melody ceases, but we can recall it ; it has been added to the store of our mind, and is now an item in our history. We may not hear that melody again for years, but probably when we do we shall " recognize " it, the old record will be stirred to new life, for it is " not dead, but sleepeth."

Some things come to us more frequently than others, and some with more intensity ; the impact is greater in the latter case, and more prolonged in the former. In either case the effect is that the impression is more marked, and these things attain to a greater strength of record in the mind ; they stand out from the welter of weaker impressions in the mind and achieve a certain dominance. The mind is ever a battle ground, and ideas are always tending and striving to pass into action, for an idea in mind is an incipient action. The importance of dominant ideas is that, simply because

they are the strongest in mind, they determine our state of mind or our action.

We may observe this in actual practice; a child may have an inherited bias towards bad temper, and very early in life some contretemps offers it the opportunity of showing the activity of this bias. It gets angry, cries, or screams; these early efforts are at once recorded by memory. To the inherited bias the child has now added the fruits of his experience. On the next occasion he will be more likely to be angry, and on subsequent occasions still more so. Presently the child will have a true dominant of anger, which will show itself whenever the opportunity offers.

Opportunities, however, do not dictate action, they merely serve as its occasion. A person with a good-temper dominant does not get angry as does the one with a bad-temper dominant. Events do not control us or compel us to act in any particular way, we simply re-act according to the idea ruling in our mind; and this dominant or ruling idea is but the result of our recorded thoughts. It is perfectly possible for us to develop such reactions as may assist us, and to eradicate those that work to our undoing. On these lines we may watch character growing by the slow accumulation of thoughts, like to like; and by the control of thought we can determine the trend that character shall take. But it is a great thought that nothing can escape record in the character. It adds enormously to the responsibility of teaching, for we must recognize that all that the teacher does, or says, and even his very manner, are making impressions upon the plastic material of the pupil's mind. Therefore nothing is unimportant, since

everything counts; and even the lightest point that may escape our notice may have lasting effect upon the pupil.

Thus by the continued record of every impression character gradually fashions itself, and is as true a record of past impressions as the balance sheet of a city company is a record of its past transactions. As rational beings we are responsible for the things that we have thought. Reason has been at the gateway of the mind to reject impressions, or to allow them entry, and at this stage of the proceedings it is idle for us to disclaim our responsibility. Our thoughts have built us as we are, and if we so desire, our thoughts can alter the pattern of the building, and build us better for the future.

Let us consider the case of "nerves" in this light. When a person suffers from nerves on the platform, this can only be because the dominant idea in the mind is fear. It is impossible for a person to be full of fear with a dominant of courage; for if the dominant results in action, as it does, we can only get fear attitudes from fear thinking, and courage attitudes from courageous thinking. What usually happens is that fear thoughts are indulged in a gradual crescendo, right up to the time of performance. Consequently, when the occasion arrives, the fear-dominant is so thoroughly installed that the fears naturally follow. If courageous thinking had been definitely practised and rehearsed for two or three months before the performance, the courage-attitude would have been so firmly established in mind that it would have come out in the actual bearing. This accumulation of fear thoughts, though

by no means the only cause of nerves, is certainly the principal, and the one most easily prevented.

In other directions, our minds have grown up with a mass of haphazard dominants, some of which are good and some bad, and most perhaps indifferent; but on the present line of argument it is clearly possible so to regulate the thinking that only dominants which shall be of the utmost practical value may be developed. Thus we may become the architects and designers of our own characters. Naturally we shall only desire to incorporate those things that are "true, lovely, and of good report." Instead of nerves we shall build confidence, instead of bad temper, good; instead of anger, patience. The whole world of ideas lies open to us to choose. In thus determining to select our dominants, we decide the way in which we shall re-act to things, people, and events. We settle what effect they shall, or shall not, have upon us; and the enormous importance of this is that it enables us, in effect, to control circumstances. We cannot indeed say what events shall come to us, but we can certainly determine whether their effects shall be good or bad, and whether they shall be to us as blessings or curses.

CHAPTER IV

THE USE OF SUGGESTION

We have seen that the mind has gradually grown along the lines of its past thinking, and since this is so we can manifestly direct the lines of its future growth. It is within our power to regulate and control the thoughts that come into mind and go to the formation of character; this thought-control we can manage in a general way, but we can also accomplish it in a more precise and scientific manner through the agency of suggestion. The use of suggestion means that in a very definite way we determine upon the inculcation of certain helpful ideas in mind; we design in advance in thought, and then proceed to bring that design into being.

The subconscious mind, by reason of its perfect memory, is what we may term absorbent, accepting whatever may be sent down to it by its more active partner, the conscious mind. If we take a piece of paper and write upon it with ink, pressing this while wet upon the blotting paper, what we have written, be it true or false, is registered upon the blotting paper; and so it is with the subconscious mind. This part of the mind is generally regarded as reasoning only deductively, and as having no powers of induction from facts up to principles; but when once a central fact is given

to it, it has the power to deduce the logical conclusions and to work from the central fact with a high degree of accuracy. The subconscious has thus no power of rejection, but is simply concerned to register the ideas impressed upon it, and to work them out without reference to their truth or falsity. It is thus a two-edged weapon and can work just as easily to our detriment as to our advancement; but by taking control of this faculty we gain the extraordinary power of sending down into mind ideas which are not yet true in fact, and of having them recorded and incorporated in our mind, to that extent becoming true.

If we refer to nerves, by way of illustration, we see that a person is so troubled and in difficulties by reason of the dominant ideas which he has acquired. But, however serious his case may be, it is open to him to draft such a thought as—"I HAVE ABSOLUTE CONFIDENCE" or "I ENJOY PUBLIC PERFORMANCE." We may agree that these ideas are very far from the truth, but there is nothing whatever to prevent him thinking and picturing in imagination this highly desirable state of affairs. If he has a vivid picture in mind of the confidence and enjoyment he is suggesting to himself, that picture goes down on record in mind and does something towards weakening the already established dominant of fear. Suppose that he practises and rehearses this new and better idea many times, it naturally makes the deeper impression; and if at the same time he ceases to indulge his fear thoughts, continuing to build the courage idea, there must logically come a moment when the new idea must first equalize and then overtop the old. When this has

happened, the dominance will have turned from fear to courage, and from this courage dominant must come the attitude of confidence and enjoyment in which fears can play no part. What was at first untrue has now been made truth by suggestion.

This, to some, will undoubtedly seem much like a fairy tale, and the severely practical person will be tempted to say that such things do not happen nowadays; but experience has demonstrated over and over again that this can be accomplished, and that, with right methods and application, there is a practical certainty of result. Some people will naturally take longer than others to achieve a like effect, for there exists a wide difference in the amount of past bad thought to be overcome, and also in the ability to direct the thoughts clearly and effectively, but everybody can do something. Children have as a rule little in the way of bad thinking and so they can be started on the right path from the commencement; in such case they will rarely be found to experience any difficulty with their nerves, while their confidence will increase with each successful performance.

The adult may have to spend time in undoing the damage that has already been wrought in mind, but the greater the damage the greater the necessity that the task should be attempted. There lies no magic in the process and nothing mysterious; many have realized by the light of Nature that they must bend their Will and concentration to this task of self-mastery, but suggestion puts a potent method into the hands of anyone who will take the time and trouble to make use of it. Once the fact of perfect memory is fully grasped,

it becomes perfectly plain that the whole process is logical in the extreme; in fact, given the right conditions, the desired result must follow. The Biblical advice "Be ye transformed by the renewing of the mind" is merely the scriptural expression of this sound psychological teaching. Anybody may be, indeed, practically transformed if they will but take the trouble to see to the regular renewing of the mind by the careful regulation of the thoughts.

As there is a technique of suggestion, those who are skilled will naturally secure a greater result than those who are new to the process. The most simple way to set about this renewing of the mind is to select four concise and definite suggestions dealing with any topic in our mental development that we may desire, and these suggestions should be positive and affirmative. We do not say "I am NOT nervous," but rather "I am confident," this latter being the idea which we would wish to inculcate rather than that of nervousness. We write these four suggestions down upon a slip of paper, dating them and committing them to memory. Then we can proceed to take that message in through the eyes, we can say them aloud and get the message in through the ears, and we can inwardly visualize the mental picture that they indicate. Then with this idea in mind it will be well to stand up, squaring the shoulders to give to the whole attitude that bearing of confidence which we are suggesting; this will ensure that the muscles work in conjunction and association with the mental picture. It will, as a matter of fact, be desirable to utilize all these methods, as they reinforce and strengthen one another; and if we make use of

the odd minutes that would otherwise be wasted, we can send down these ideas into the mind without much trouble several hundred times a day. At this rate it will not be long before we find the new idea beginning to oust the old, and our early indications of progress will quickly inspire us to go on to further success. The suggestions can be changed as desired and found necessary, but it is not wise to continue too long at the same set, lest the work become mechanical through staleness, in which case most of its value will be lost.

We do not wipe things out of the mind, for there is no such process known to psychology; the nearest we can approach to that is the gradual fading into practical oblivion of ideas that are never resuscitated. We do, however, outbalance the old ideas by the new, working on the Bible formula of "overcoming the evil with good"; possibly also, as the good continues to grow in ever-increasing proportion to the evil, there is a kind of antiseptic action in mind which gradually sterilizes the evil. We can see in practical experience the way in which the balance may sway between two fairly-matched ideas of opposite tendency; we hesitate, we wobble, we are in two minds as to how to act, and the dominance is in doubt. Presently we reinforce one side or the other by an effort of Will, and as the balance sways to that side we act accordingly. But the whole incident is eloquent as to the reality of the theory of dominant ideas.

These methods can be adapted to deal with any desired characteristic, and character-building thus becomes a process of which the main outlines are tolerably clear. We can do an enormous amount for our-

selves in securing just those qualifications and attitudes of mind which are recognized as essentially those of a good teacher. There is no longer any need to lament and succumb to this or that deficiency, for we can set to work at once to remedy that defect. When we see the possibilities thus placed within our own grasp we can also realize how feasible it is to mould and direct the plastic material of the child mind by the same means, and also to put him to help himself. The fact of a perfect memory can be readily explained to a child; he can understand at once its bearing upon his own character, and his co-operation in his own progress can then be secured. In short, as soon as we ourselves are clearly convinced by experience of what we can do, we can hand that knowledge on to the pupil direct.

Suggestion is continually at work in education, sometimes well and sometimes ill. As an illustration of how it should NOT be used we may cite the case of a choirmaster whose practice was always to go through a new Anthem with his choir boys, pointing out the difficult places. The net result of this was that, even had the passages possessed no intrinsic difficulty, they would have been found harder than they need have been, by reason of the bad suggestion. It would have been perfectly possible for the choirmaster to have taken and illustrated each individual passage, telling the boys that they would then find them quite easy. The effect would have been very different. A hesitating manner gives rise to a suggestion of diffidence and doubt, promoting distrust in the mind of the pupil, and this at once impairs the value of the teaching. Suggestions themselves must be direct, clear, and positive;

and teaching should be modelled upon the same bases. Negatives in teaching should be avoided, and "don't say 'don't'" is a maxim of education as well as of suggestion.

We would attach the very greatest importance to character-building in connection with teaching, for there is an extraordinary consonance between the outer world of circumstance and the inner world of character. The Ancients held—"as within, so without," and very little thought will show how true is the dictum, for character is surely reflected in the very clothes we wear, the food we eat, the books and the pictures we have around us, and all the accessories of our surroundings. We choose them, they reflect our taste, they are the outcome of what we are ourselves; if we were different, so would they be different also. Further, our character is mirrored in our habits of mind and speech, in our habits of body and in our health. We find the same consonance in the friends we make and the companions that are around us; again we find it in our prospects and in our finance. This is too vast a point to elaborate here, but every one of these things in ways remote or close hinges upon and is connected with our character. If we were to change that character overnight we should simply start a series of changes in all these externals to bring them into line with the change in ourself.

In point of fact, the only way permanently to change those things around us is by the alteration in the self; we have the power to mould character along the lines of our choice, and exactly as the character is modified so must there come corresponding changes in all these other directions. But it is absolutely and permanently

useless and futile to try and effect alterations in the outer circumstances while leaving the character unchanged. This is the cause of so much waste and misdirection of energy in the world at large, which refuses to realize that all changes without must be preceded by changes within, and that we can in no wise secure a nobler world till we ourselves are nobler. The Bible tells us again—"Seek ye first the kingdom of Heaven (which is within) and all these things shall be added."

CHAPTER V

BODY AND MIND

As a factor in education and teaching the very close connection that exists between body and mind is frequently overlooked, but so close is this partnership that they are not so much two as one. They may be likened to the two halves of a wheel; where one half goes, the other must of necessity follow. We know in a general way that mind affects the body, and the body in return influences the mind, but we wish to show more specifically how close and important is this connection. Teachers will frequently find that in addition to being "guide, philosopher, and friend" to their pupils they may also have occasionally to act in the capacity of doctor.

The first thing to be noted is that neither mind nor body is fixed, but that both are in incessant growth. The body is composed of an extraordinary number of cells, exceeding the population of the globe since the Christian Era; and these cells are being continually broken down by our exertions, mental and physical, and are as continually being repaired and renewed from the food we eat. Consequently the body is actually and very definitely changing even from minute to minute. It is estimated that a complete and thorough renewal takes place in all parts of the body in a period

of some few years. In the growth of our hair and finger nails, in the mending of a broken bone and the healing of a cut, we find ample evidence of this continual renewal of tissue.

After some similar fashion the mind also is in a state of continual flux and growth. Our minds at a given moment contain certain material, but in the next minute, and still more in the next hour, they will acquire fresh impressions which will go down to confirm or modify what is already there. There can be no standing still in mind, there must be growth of some sort. Both mind and body are thus infinitely fluid and infinitely plastic, ever growing side by side, while everything that happens to the one casts its reflection and shadow upon the other. But the dominant partner is ever the mind. We may not be able at a moment's notice to change the bodily state, but we can always alter the current of our thoughts and so indirectly influence the body. Thus it is through the control of the mind that we eventually arrive at our increased general control.

The specific way in which mind acts upon the body is through the circulation of the blood and the secretions of the various glands. An interesting illustration of the very direct way in which thought and emotion can affect the circulation of the blood is shown in blushing, where a very considerable alteration in the distribution of the blood arises from a simple mental cause. It has, however, been demonstrated in more specific and scientific ways that the effect of concentrating the attention on a particular part of the body is to send there an increased supply of blood. It has even been

seriously suggested by physical culture experts that a muscle can be developed and strengthened by the action of thought without any actual use or movement. But thought can act in two ways upon the circulation and general nutrition of the body ; according to the type of thought entertained it can act constructively or destructively, as an energizer or as a depressant. Its effects are naturally dependent upon its direction.

Our knowledge of the subconscious mind assures us that all our past thoughts are therein on permanent record ; and it is a thousand pities that, with regard to health and general well-being, most of our thinking has been of the depressing rather than the energizing type. We do not think about health, we take it for granted ; but we do most emphatically and far too frequently dwell upon disease. Common colds force us to unwelcome attention, and headaches assert themselves ; we enquire about other people's illnesses, and all too often share with them the discussion of ailments and pains. As a consequence the general run of recorded thought in our mind is distinctly unfavourable to health. It would be far more advantageous to engage in systematic thoughts of buoyant health, and so to acquire an energizing bias in that direction.

Our conscious thoughts and emotions have also been shown to affect the body in very direct fashion. An emotion such as fear can do practically anything in the body from merely disturbing the functions to inducing paralysis or causing death. What we term the negative emotions, such as " anger, hatred, malice, and all uncharitableness " seem to have specific effects through the system of ductless glands, exercising a

disturbing and disquieting effect upon the body. On the other hand, all the positive emotions, such as hope, cheerfulness, kindliness, and love are recognized as promoting the well-being generally and inducing health. It is therefore open to us to choose either of these types of thought, and there can be no question that more can be done by the individual for his own general health by the careful regulation of his thoughts than by all the medical men in existence. This is Nature's premium placed on right thinking.

The next point to which attention must be directed is the breathing. The body cannot live without oxygen and if the supply be deficient the bodily health must suffer. With the lowering of the general vitality the tone of the whole nervous system must also be lowered. In other words, with an insufficient supply of oxygen the brain cannot either think, study, teach, or learn thoroughly. It is found that sedentary workers take in at each inspiration perhaps as little as thirty cubic inches of air, while the trained singer, accustomed to the long runs and florid passages of Handel, may inspire as much as three hundred cubic inches. Between these two there is a world of difference.

Total deprivation of oxygen is known to put an end to the power of " contractility " in the muscles. All the muscular workings of the body are carried on by the contraction and relaxation of opposing pairs of muscles, and by contractility we mean the power of the muscle to contract and exercise a pull upon receipt of a nerve-stimulus. In the rigidity of death the stiffness of the muscles arises from the complete lack of oxygen which abolishes this contractility, and it may be suggested

that a deficient supply of oxygen will similarly cause a lowering of the general muscular tone. Therefore we suggest that whether the work be composition, vocal, or instrumental study, for the musician breathing exercises are in any case necessary. In addition, the general health is immensely improved by the practice of a few regular exercises every day, and directions as to these may be found in any physical culture manual.

The bodily processes, it may be observed, are mainly carried on by means of liquids—the blood, the secretions of the glands, the lymph, and the various digestive juices—and the body is continually getting rid of moisture through the skin, the lungs, and the kidneys. If more moisture be given out than is taken in, the due balance may be disturbed and these processes may tend to become sluggish and clogged. Many people would find their health improved by the simple act of drinking more water, and we suggest that it is a matter for individual experiment to find out whether this be so.

The main function of the food we eat is—as has been mentioned—to repair the wastage of tissue caused by our mental and physical exertions. The amount of food we eat should therefore be proportionate to the amount of work done. If we take more food than is necessary to make good this wastage, it does us harm rather than good. It is perfectly possible for a person to over-eat until, his digestion being practically ruined, he perishes from starvation. The important thing is not the amount the individual eats, but what he is able to assimilate and digest. The whole digestive tract in the body is some thirty feet long, far too long for a civilized human being to-day; and during the

whole of the time that the food is passing along this tract it is being treated with juices, acids, and ferments in the most wonderful way. All the nutriment that can be used for the purposes of the body is being extracted, and the material that remains is so much waste matter, affording a ready breeding ground for harmful bacteria. When this deleterious matter is allowed to remain unduly in the body it sets up poisonous effects which have a most harmful effect upon the whole organism, and especially upon the nervous system.

It is impossible, for example, for a person who suffers from constipation to sing properly, or even to be mentally clear and alert. Therefore the internal cleansing of the body and the removal of these waste products, at least once every day, becomes a matter of the most extreme importance. No teacher who neglects this point can hope to teach up to his proper effective level, and neither can any student under the like conditions expect to do his best work. But the evils of constipation are not to be met by the greater evils of pills and purgatives, rather by simple attention to diet, by the substitution of brown bread for white, by reducing the amount of meat eaten, and by the inclusion of fresh vegetables, fruit, and nuts into the dietary. Physical exercises should also be a part of the daily régime, and these measures, coupled with regularity and commonsense, should prove all that is necessary.

Relaxation is a little point to which attention should be directed. There are some people who never "let go." But the consequence of this is that the nervous system wears out before its due time. If the muscles

be completely relaxed it will generally be found that this induces a feeling of mental relaxation to correspond, while if the mind be freed from tension the body will tend to follow suit. Sitting completely relaxed for half a minute will give more thorough rest and recuperation than sitting bolt upright in a chair for half an hour. Some people never relax even when they go to bed ; they find themselves with their hands still clasped, their jaw gripped tight, and their forehead puckered. Such folk rarely get complete rest. The ability to relax at will serves greatly to reduce the wear and tear of everyday life, and especially so in the life of a teacher.

Sleep is the true restorer of both mind and body. Primarily man is a spiritual being, and as such his real source of energy is spiritual also, this energy coming to him chiefly in his hours of sleep. Total deprivation of sleep is known to spell death in a remarkably short time ; but burning the candle at both ends and enforcing a limitation of the hours of sleep simply court disaster by cutting off the true source of energy. Little attention need be paid to those people who talk about " eight hours for a man, nine for a woman, and ten for a fool," for the complete fool is the man who expends his energy too freely in strenuous work and deprives himself of the opportunity of renewing his store by reducing his hours of sleep below the danger level.

The somewhat obscure point of personality may finally be referred to. It is becoming known to the science of to-day that each human being is surrounded by what may be termed a human atmosphere, a psychic envelope, or aura. This has long been known in occult

circles, but since the publication of a book entitled "The Human Atmosphere," by Dr. Kilner, late Electrician to St. Thomas' Hospital, London, this has come within the purview of orthodox science. Sensitive folk, clairvoyants, artists, and not a few musicians, have claimed to see this aura surrounding certain individuals, but Dr. Kilner showed that it was possible to make this aura visible, by the use of certain chemical screens, to the trained normal sight. Therefore on this basis we are entitled to deal with it as a physical fact.

This aura surrounds the human body like an egg-shape envelope, extending, maybe, a matter of an inch or so beyond the head and body of a rudimentary and undeveloped individual, up to many inches, or even feet, in the case of one highly developed. The "atmosphere" is a kind of subtle extension of the nervous system, capable both of receiving and transmitting impressions. It varies in texture with the fibre of the individual, being coarse or fine as he is himself. It varies in its colouring with the characteristics and emotions, and it alters also with the state of health. In a spiritually developed individual it may appear as a tenuous lightness which may almost be felt as well as seen, and we have met musicians who habitually see this aura with great artists on the concert platform. Painters have represented it by the nimbus or halo round the head of the saint.

In this aura the personality is reflected for exactly what it is, and from it arises to no small degree the attraction or the repulsion which we exercise towards the folk whom we meet in everyday life. What can be

more important for the teacher than that this aura, which is so subtle an advertisement of his personality, should be attractive? There is absolutely nothing that one can do to make it anything but an accurate reflection of the true and innermost self, and therefore the only possible way of working to acquire this subtle element of personality is to train the mind to high and noble thinking, and the body to discipline and clean living. The results of such endeavour will then be realized not only in the general health, but also in this far more subtle reflex of the self—the aura.

CHAPTER VI

THE MACHINERY OF THOUGHT

CONSCIOUSNESS may be regarded as an ever-flowing stream into which run the never-ceasing impressions of the daily experiences. But if we wish to consider its workings and analyse its methods we must separate its functions and study them individually. A motion picture is a living thing while it moves, but when we examine one of the separate pictures on the film we lose all the life and proportion of the whole. So also the stream of consciousness is one component whole, and we must not forget that there are always tributaries to this stream, and that the parts are continually at work modifying and influencing one another in a most complex fashion. When we isolate one function for consideration we must remember that we have taken it out of its proper setting, and that therefore in its loneliness it has lost something of its true life and reality.

The three main divisions of Mind are INTELLECT, FEELINGS and WILL. The first of these, being too large a subject to treat as one, we subdivide into THOUGHT, MEMORY and IMAGINATION. It is with THOUGHT that we now proceed to deal.

Every teacher is accustomed to proclaim to his pupils the necessity for thought, but very many would be hard put to it to answer the pupil's query, "How,

exactly, am I to think?" Thought has certain steps, and we can best follow these if we take for consideration the way in which the mind of the child works. Here we have the processes in all their simplicity. Suppose that we give our little friend an apple; from that apple it immediately begins to receive a number of sensations. It sees the apple, smells it, touches it, and tastes it. These SENSATIONS are the first step in thought. We are supposed to have five senses, but in reality we have more, and these are the means whereby we come in contact with the world of experience around us. They give us messages of objects and events, which provide food for mental growth just as our meals provide subsistence for the body. If any sense fails to work, the mind cannot grow in that direction. To the blind man there is no world of sight and there can be no growth in visual impression; to the deaf the world of sound is non-existent.

As soon as we take the apple away from the child, all the messages stop. But, as everything makes its impress upon the brain, it is now possible for the child to shut its eyes and to call up the picture of the apple, to smack his lips and taste it, or to imagine the smell or the feel of it. The record of the SENSATION in the brain is now an IMAGE, and henceforth, part of the furniture of the mind.

The next step is the grouping of all these images together under a convenient heading, termed a CONCEPT. When the child hears his Mother ask him if he would like an apple, he immediately calls up in his mind the image of the taste, smell, feel, and appearance of the apple, and then he utters the childish equivalent of

"Yes, please." The concept is the key-word to all those original sensations which are now recorded in mind, to which the original object gave rise. Where we have frequent experience of an object our concept represents a kind of composite image of those experiences; it brings the whole of the recorded sensations in compressed review before the mind's eye. The process is so inconceivably rapid that it is not possible for us to recognize it as a definite process at all in our adult day, but in the case of the child we can observe its essential steps.

It is by means of CONCEPTS that we think, understand, and communicate with one another; we may see things, but we do not really perceive them until they are referred to the like concept in our own mind and awaken the recognition of its sensations. We may hear a foreign language and hear it perfectly, but we do not understand it unless we have a stock of foreign concepts with which to comprehend. Concepts are the raw material of thinking, and a mind is rich or poor largely according as its stock of these is great or meagre; therefore the importance of the acquisition of these is obvious.

The next step in our child's thinking is that he takes the concept "apple" and the concept "sweet" and joins them together, making an idea "apples are sweet." This coupling of concepts results in the birth of a new IDEA, and there is no other way in which an idea can come into being. We may get a large number of concepts and join them together to make a complex idea; but this merely extends the process without in any way altering its nature. For a mind to be fertile in new

ideas it is clearly necessary that it should first be stocked with a large mass of raw material in the form of concepts.

Carrying the process of thinking a stage further, our child having the idea that apples are sweet comes upon one that is on the contrary exceedingly sour. He is thereupon forced to contrast his ideas, thus developing the rudiments of a ripe judgment. The validity of any man's judgment depends upon the number of ideas he has contrasted, and if these be few his judgment will be worth little. In proportion as these increase so will his judgment be the sounder. If a so-called musician has come into contact with nothing but ragtime, we shall be well advised to question the value of his musical judgment; but when a musician has had much experience and possesses a familiarity with a wide range of musical ideas, then we shall rightly assess his judgment as of greater worth. We might put in a word here for the much maligned professional critic who, in the exercise of his calling, is bound to contrast an enormous number of musical ideas in performance. Other things being equal, he can hardly fail to be better equipped to exercise judgment and criticism than those who have not had access to the same material.

Herein lies the inestimable worth of education which enables us to contrast the ideas not only of the present day but of all past days that have left their record in the pages of history. Not only are we enabled through education to come in contact with the ideas of our own time but also with those of countries other than our own. Wide contact with men and affairs gives the sound judgment and balanced outlook which nothing

else can in the same way supply, and which is not possible to those who have been denied these advantages.

Nature herself teaches us to judge of things by the pleasurable or painful results which they produce, and consequently there are certain things we have learnt to do and other things which we have found it wiser to avoid. Thus our judgments gradually formulate themselves into LAWS. In the business world, for example, are laws derived from many judgments, such as "Honesty is the best policy." In dealing with correspondence the wise law is "Do it now." In a social way the law is "Politeness pays," in the traffic "Safety first." In the musical realm the law is "no consecutive fifths." Nobody actually makes these laws, they are simply the recognized fruits derived from universal judgments.

The Ten Commandments show the stage being further advanced, having coalesced into two great PRINCIPLES, "Love for the Deity, and Love for mankind." So also the general effect of all our formulated and unformulated laws in mind is to incline us towards one or other of the great principles of life, Selfishness or Service. We may not actually acknowledge that we are in either of these camps, but, although there is every possible degree of Service, as of Selfishness, a man must necessarily find himself if not in one then in the other.

Thus the stages in the process of thought will be, in tabular form :—

1. SENSATIONS	4. IDEAS
2. IMAGES	5. JUDGMENTS
3. CONCEPTS	6. LAWS

7. PRINCIPLES

CHAPTER VII

TRAINING THE SENSES

All mental training must begin with the development of the senses, by which alone material can come into the mind. The eye and the ear are the chief avenues concerned in the ordinary way, and nine out of ten of the sensations which come into the mind are visual. But our senses actually put us in touch with an extraordinarily small range of vibration. The range of vibrations that the ear can receive, for instance, is approximately from forty a second to about forty thousand. Between this range and that of sight there is an extraordinary gap in which only heat radiations can affect us. Sight begins at about four hundred billion and extends to seven hundred billion vibrations per second, being rather less than the octave. But of radiant waves there are two further octaves beyond the visible violet, and some five others below the visible red. Therefore, although our senses seem to inform us of the world of vibration outside, they tell us, as a matter of fact, of only at best some ten octaves of sound and less than an octave of sight.

Thus we may be sure that the world is full of sounds that we never hear and sights that we never see, and countless other vibrations with which we can never come in contact because we have no sense organs

adapted to receive them. Our brain is therefore rather a limiting than an informing organ.

These ranges that we have given are approximately those of the ordinary individual, and, narrow as they are, in practice they become very much more contracted, because of the extremely inefficient way in which most people's senses work. It is a commonplace remark that the things we see every day we cease to notice at all; and many people do indeed go about the world with eyes that do not perceive and ears that do not hear. The senses need systematic training so that they may serve us better. As a matter of fact, it is not the actual eye or the ear that we train, but we teach the brain behind the eye and ear to use these organs to better advantage. The eye is a camera and we may suppose that the lens takes in all that there is to see, but the brain only observes, or half-observes, that in which it is interested. By concentration and training the brain can be taught to get in more messages through the eye.

Concentration is the key of all sense training, and it means that, instead of spreading our attention thinly over a wide field, we focus it at a single point, turning the full power of our attention to one thing at a time. If we focus our attention on the workings of a particular sense, that sense works better. If we hold a watch at the limit of hearing from the ear, we may perhaps be able to hear it ticking at fifteen inches; if we now close the other ear with the finger and shut the eyes we shall probably find that we can hear it at twenty-five per cent. greater distance than before. This means that we hear more and hear better. The same applies to all

sense working, and the limits of sense training are as yet unfathomed.

We know that in hypnosis an extraordinary super-sensitiveness of the senses is brought about, and they seem to be alert to an uncanny degree; but we also have examples of what concentration can do in the normal way. Compare, for instance, the architect's grasp of building detail with that of the untrained observer; the one is as wide as the other is narrow. The observation of the botanist is such that going down country lanes he would perhaps see twenty or thirty times as much as a non-technical person. We observe the extraordinary acuteness of hearing of the blind, and this is probably owing to their concentration on the most useful sense still available to them. The blind man can pass down the street, and tell us when he is passing shop windows, a front door, a lamp post or pillar box, and this is by the echo of his own footsteps. Compare too the hearing of the musician with that of the non-musical person. After having heard a first-class orchestra play a symphony, the non-musical person would simply tell us that he had heard the band play a tune; the musical individual would have had a whole wealth of impression which was denied the other. He would have studied the symphony beforehand and would have been aware of its themes and the manner of their development; he would have been ready to recognize the various points of interest as they came along; he would have been able to discriminate in listening to the orchestra and would have noticed the general balance of tone as well as the work of individual instruments. His wealth of impression

would have been enormously large as compared with that of the non-musical person.

From this illustration we can see that one of the first effects of sense training is to enlarge the world in which that sense operates. By seeing more, our world of sight becomes larger; by hearing more the universe of sound holds more for us; so that sense training is a simple but efficacious way of enlarging the world. Moreover, since life consists not merely in the number of hours that we spend on the business of living but rather in the sensations that we experience, it follows that if one person's senses are ten times more alert than those of another, the former is crowding ten times as much life into the same span of time as the latter. Therefore the training of the senses can enable us also, in effect, to live longer.

In increasing the accuracy and extent of our observation, we find ourselves analysing the object and noting points that we had not previously observed, and this keener observation thus very naturally leads to greater knowledge. As a very general rule, with the increase of the knowledge of a subject there comes a corresponding increase of interest; for we cannot possibly be interested in anything of which we have no knowledge at all. But when we feel that we have to some extent mastered a subject, it claims our interest, and from that very interest arises a corresponding keenness of observation. Thus, Observation, Knowledge, and Interest begin to follow one another very naturally, and it is only necessary for us to start the Observation by an effort of Will and it then tends to become automatic. Children should, as the basis of all education,

be taught to observe, and they can be shown that observation has to be directed to two quite simple points, namely similarities and differences. The similarities will naturally be observed first, but later there comes the discrimination as to the points of difference. Classification in this way from the very beginning is the basis of a well organized mind.

Aural training in music is the development of the ear in this perception of similarities and differences. Instead of having one rough-and-ready porter to carry goods into the house (which is what the senses do in the furnishing of the mind), we engage specialists to carry in according to their particular qualification. If we teach the ear to distinguish between "forte" and "piano," we have two porters instead of one. If then we learn to discriminate between "piano" and "forte" and "pianissimo" and "fortissimo," we have then four porters, and so on. We can never have too many porters, and the characteristic of our mental and physical store-house is that it can never be over filled; for the brain, unlike any ordinary house, grows with its furniture. By training the senses to work better and to discriminate more accurately, we increase our stock of concepts at a rapid rate; and these will in the first place relate to rhythm, pitch, tone, key, colour, harmony, cadences, etc., then we shall have, in addition to our mental concepts of ear and eye, our muscular concepts; thus from these and other sources the musical mind is stocked.

An educational maxim is "the thing before the symbol," which means, for example, that a child should know what a chord sounds like before being told that

it is a chord. The old idea of teaching was to insist on the memorization of a number of definitions by rote, a process which possessed by itself little educational value. A child very often has a remarkable facility in verbal memory and will be able to repeat a definition perfectly correctly without having any real idea of its meaning. A parrot frequently shows the same aptness in repeating without any actual understanding. The recognition of this fact has led to an over-depreciation of the value of definitions and, indeed, the teaching of these has sometimes been actively discouraged, but definitions have at any rate the merit of inculcating accuracy. If we ask an ordinary person to define a chair he may possibly reply that it is "a thing with four legs and a back, that you sit on"; this would apply equally well to an elephant or a camel. But it is obvious that until we can describe and define with a higher degree of accuracy than this, there is a looseness about our thinking and expression which calls for remedy. The ideal would be the thing before the symbol, and then accuracy of definition to follow.

As regards exercises for the training of the senses, we really need little beyond the operations called for in the daily round. If we learn to observe clearly and to take in our sense impressions keenly and accurately, we shall find that little else is called for. Games of observation are an excellent way of training, and there used to be one where anything up to twenty articles of various types were placed upon a tray. Competitors were allowed perhaps half a minute to observe and memorize these, and then they were given paper and pencil and asked to write down the names of these things. This

was a game with distinct educational value. We can make the habit of observing faces or hands, coins or postage stamps, flowers or butterflies; and the main value of collecting things as a hobby is that it trains the powers of close observation and discrimination. We can practise keen observation when passing shop windows, by trying to see how many articles we can remember, describe and price after we have passed the shop; and we shall find that our powers readily increase under this simple training.

In similar ways we can develop our hearing of music; we may first direct the attention to the melody, then to the bass part, and afterwards to the inner parts. In listening to an orchestra we may practise picking out the sounds of the individual instruments. In hearing fugues we listen for the subject, countersubject, the various points of imitation, the development and the working out; then we can put intellect aside and listen emotionally. In such ways as these there will be ample scope for the training of the senses to do better and finer work in furnishing the mind with the raw material of thought-concepts.

CHAPTER VIII

THE FEELINGS

We now proceed to deal with the emotional side of the mind, leaving the intellectual processes for the time being. The difference between feelings and instincts is that the former are acquired, while the latter are inherited. The feelings are developed by the record of our thoughts, and represent the ideas that have held predominance in our minds. Grumbling thoughts, if long indulged, will inevitably produce a tendency towards a permanent feeling of dissatisfaction and complaint, as also will any other type of thought in its appropriate direction. As the feelings are thus acquired through the influence of thought, it follows that we can build new ones by re-directing and controlling the thoughts, while the old feelings can be prevented from growing stronger by a refusal to entertain them. There is therefore no finality about this matter, but, like the rest of the mind, this department also is in a continual state of growth and development.

The importance of the feelings is that they adjust us to life. We meet the events of life at an angle which is determined by our feelings, and some people to their undoing possess feelings which make it practically certain that they will meet events at the wrong angle every time. These folk are their own worst enemies,

and it is not truly life that serves them badly as much as the wrong attitude which they bring to the events of life. Having the wrong feelings uppermost, nothing can go permanently right with them. Thus they will always be unsuccessful, and there is absolutely nothing which can so completely undermine the courage and confidence as persistent failure. On the other hand, nothing develops buoyancy and confidence like success, and it is the feelings that contribute largely to the ultimate issue.

All our thoughts will fall naturally into one or other of two categories; either they will be positive, constructive, and upbuilding, or else they will be negative and destructive. From the accumulation of these there will grow quite naturally a series of predominant feelings, positive or negative as the case may be. In the lives of successful people we find in degree positive feelings which have been responsible in no small measure for their success, while negative feelings will be found to have been accountable for the failures. We shall therefore enumerate a list of some of the feelings necessary for success, and the list, though making no pretence to exhaustiveness, will at any rate be tolerably comprehensive.

As the first of these feelings we would put the ideal of service, the desire to be of use to the world. A moment's thought will assure us how essential is service; we have only to think of the domestic service, the tram, train and bus services, the postal and newspaper service, telephone service and so on, to realize that service in some form or other is with us every hour of the day. Where the service is good, things are found to run

harmoniously; but where the service is bad, friction immediately arises.

In the ultimate view, service is the practical expression of Love, and love is the universal law of laws. We see its operation in the form of attraction; on the mightiest scale we call this force of attraction Gravity, on the human scale we call that same attraction Love, and on the scale of the infinitely small we term it Chemical Affinity, Molecular Attraction, or Cohesion. It is this force in its various forms and agencies which holds the very universe together; if for one moment repulsion could be substituted in its place, the very universe as we know it would fly to pieces and everything solid, or seeming solid, would disintegrate and fly apart. In our human lives it is just because love is stronger than hatred that families and nations hold together and that civilization itself endures. Love, and its expression in service, is thus a fundamental condition of our very existence.

Service is a law of Nature, and her premium on usefulness is development and growth; but her punishment for lack of service or utility is decay and atrophy. If a man will not use his arm or his brain the tendency is for these to become unusable; but with right use they develop and grow. All things in the world, whether living or inanimate, are subject to this law. Races of animals that have outgrown or outlived their usefulness are now represented by specimens in the museum; spinning wheels, water clocks, and hansom cabs are now but curiosities for exactly the same reason. Nature applies this law also to singers who cannot sing and to teachers who cannot teach; she is

delightfully impartial, and when the ability of such to render their meed of service is past they are subject to this ruthless law of elimination from the scheme of things.

Service is the paramount law in the business world, and the essence of any business transaction is a mutual advantage. Where the advantage is all on the one side there is no true business, and anything that works against this mutuality is either fraud, failure, or false pretence. When a shop gives consistently bad service it is on the high road to bankruptcy ; and when a firm turns out articles by the thousand which no one will buy, it is simply extinguishing itself by squandering its capital. The law universal in the world of affairs, as in that of Nature, is service, and, as the Bible puts it —" He that is greatest let him be your servant," that same service is the true and final test of greatness.

The tragedy of life is that so very often at the outset of a career the individual elects to take the road that promises the greatest personal advantage. If this should happen to be also the way of greatest service, the issue may yet be successful ; but as a rule it is not this way that apparently promises success to the self-seeking individual. Service followed for its own sake will ultimately bring its corresponding reward, but selfish ends can never finally result in other than dissatisfaction. Nobody in his senses would take up teaching for the sake of its financial reward, but in the cause of service there is no finer field for influence and whole-hearted endeavour. For these reasons we place the service ideal in the forefront of the positive feelings.

The next feeling to be cultivated is Faith, and this,

again, is one of the universals of our daily life without which human intercourse would become impossible. Our whole life is based on faith ; we go to bed in sweet and simple faith as to the advent of the next morning in its due and regular course. We carry out our daily programme in faith that things are generally what they seem and profess to be ; that the bus labelled South goes South, that the bowl labelled sugar contains sugar. Our life would become a practical impossibility, a very nightmare of doubt and wonderment, had we not this element of faith which takes these ordinary things for granted. But faith, besides being the background of our whole life, is also a tremendous force and an asset of much value. The man who has faith in himself (always under the divine providence, be it said), can in his mission remove mountains of difficulty, while he who has no faith will rarely so much as put his hand to the task. A man who has a great belief in himself may even, as by some hypnotic effect, impose that faith upon other people who possess no particular mental momentum of their own. We may observe every day the strong-in-faith leading the weak-in-faith, and this because the positive must always bear this relation to the negative.

As a matter of common sense it is therefore necessary for the teacher to have a lively faith in himself and his work, and to adopt a bearing and demeanour that betoken the same, tending thus to inspire a like faith in others. We have pointed out that intercourse between man and man breaks down where there is no such backing, and still more certainly is it impossible for a teacher to give effective instruction in the absence of this basic element of faith. If we do not believe in

the doctor, it is probable that he will fail to cure us; if we do not believe in the parson, it is of little use to go to hear him preach; and if we do not believe in the instructor, it is waste of our time and his to listen. Therefore, if the teacher would inspire faith he will assuredly not be able to do it by going about with dejection, apology, and diffidence writ large upon him. He must have a tolerably good opinion of himself, without bounce or bravado, but he must be specially careful to see that on all occasions he lives up to the standard which he has set for himself. Anything that suggests distrust, whether in manner, method, or speech, should be eradicated; it is not reasonable to expect other people to have that faith in us which we ourselves cannot show. This feeling, too, is acquired by the thoughts that we encourage; and therefore, if that belief in ourselves and in our work does not yet exist, it is high time that we should bring it into being by the schooling and directing of those thoughts.

Faith, however, is a two-edged weapon which can cut both ways, and it depends for its effect upon its direction; this means that, to be a constructive force, it must be inspired by the element of hope. Optimism and pessimism are the logical results of thoughts, according as they work in an upward or a downward direction, In either case faith will produce results, but while the optimistic bias is helpful, the pessimistic results will be uniformly bad and disturbing. We generally manage to see what we look for, and if we are ever seeking out the undesirable and disappointing things of life we shall so colour the mind that we shall be likely to find nothing but these unhappy treasures. If we look for the

elements of spirit and nobility in all whom we meet, and try to discover the ultimate good behind the obvious evil, so training our faith to ground itself upon the eternal verities, we shall still be able to hold fast to our hope and to turn our faith upward even in the face of doubt, discouragement, and seeming failure. So out of evil shall we find good.

CHAPTER IX

THE FEELINGS (*continued*) AND THE WILL

EARNESTNESS is the next positive feeling that we suggest, and it is one that to-day is rather notoriously lacking. There are too many people who are not really interested in, or keen upon, their work, and in consequence their attitude towards it is lacking in earnestness. We find too much of the "don't care" disposition, and nobody could poosibly suggest this as a basis of success; but some reason for this is probably to be found in the casual and haphazard way in which people tumble into their work. Only in the last few years has any scientific attempt been made to suit the individual to his task, and quite notoriously the world is full of misfits. People are compelled to labour at tasks which do not interest them in the least, while all the time they are hungering for work which would be congenial and for which they are by nature fitted.

We are all born with inherited aptitudes and with qualifications which fit us for the doing of one thing rather than another. When our daily work happens to be in line with this natural ability we find happiness and a means of self-expression in the daily round, but where our work cuts across the grain of our inherited adaptations there can only result friction, indifference, and inefficiency. When we are not interested we do

not attend, and when we do not attend we forget and make mistakes. The more mistakes we make, the greater is the decrease in the value of our work ; consequently, a lack of earnestness can in time reduce the worth and efficiency of our efforts to zero. It is at any rate possible to make an honest and consistent effort, by observation and the acquirement of knowledge, to gain an interest in our tasks ; but if this should finally prove impossible, then it is high time to consider whether we would not be well advised to direct our energies into some other channel more favourable to earnestness, efficiency, and happiness.

Another feeling quite obviously necessary is that of honesty. We do not take the ground that it is necessary to obey the laws of the land—that goes without saying —but we suggest that in minor ways it is advisable to pay scrupulous regard to honesty and justice. Punctuality is a case in point ; there are people who would never dream of robbing others of their money but who have no scruple in robbing them of their minutes by keeping them waiting for an appointment. Some teachers will allow themselves to begin a lesson a few minutes late, or perhaps will finish a few minutes early and promise (and sometimes forget) to make it up next week. Others may show insufficient consideration in postponing or altering lessons at short notice ; we know, of course, that pupils themselves are also prone to these undesirable habits, but in no case do two blacks make one white. It is in little matters such as these that a strict dominant of scrupulous honesty should be maintained.

Courage is another feeling essential to progress, and

yet the usual impulse of the average individual when asked to do something outside the narrow range of his daily activities is to decline and to say—" Oh, I can't." This " I can't " attitude bangs the door in the face of the opportunities that are continually presenting themselves, and in the majority of cases the " I can't " is definitely untrue. It usually means " I don't want to," or else " I have never done it before, and I don't want to exert myself sufficiently to try it now " ; but we certainly cannot grow greater and more resourceful by revolving in a daily round which makes no call upon our latent powers. Tasks greater than we have before accomplished stretch our abilities, and they never again wholly contract to their original limits. New occasions and new tasks call into being fresh strengths and capacities ; therefore, instead of letting our lack of courage dismiss our opportunity of progress, we should rather embrace it with thankfulness, and do the best we possibly can under the circumstances. Keeping our critical faculties alert and perfectly awake to our shortcomings, we should then determine to do better on the next occasion. If instead of courage our feeling be fear, it is proof positive that the run of our past thinking has been towards the negatives of doubt and distrust. Cowards and heroes are made by the same power of thought, but the one has nourished himself on the poison-thought of fear, while the other has fashioned his character upon sturdy ideas of strength and courage.

The final feeling on our list is that sympathy which issues in tactful behaviour. This is the ability to see things from the other person's point of view and to feel with them. It means that instead of riding rough-shod

and tactlessly over feelings and opinions, we recognize that other people have the right to a point of view, as much as we have ourselves. It further means that we are able, by attuning our feelings to sympathetic vibrations with those of another person, to put ourselves in touch with them and acquire a point of contact. Without such an adjustment, whether mutually made or one-sided, it is impossible for any co-working to be secured. There is, for instance, little point of contact between a high-strung nervous teacher and a dull lethargic pupil; unless the teacher can slow down his rate of vibration, or the pupil can quicken his, there is little chance of successful teaching or learning. We should be able to adjust instinctively and unconsciously to almost any disposition or character with which we come in contact. When we have secured our point of contact, then we can quickly bring our influence to bear to turn the mind of the pupil in such a direction as we may desire.

The lack of sympathy means that our behaviour will be tactless, and we meet only too many people in the world who leave a trail of enemies along the way they have passed. It will be necessary for us to make our living out of the people we come across, and it is not a wise proceeding to increase our difficulties by compelling ourselves to make it out of enemies instead of friends. The ability thus to adjust ourselves means that our sympathies must be kept ever elastic, not being allowed to become hardened by age or any taint of selfishness. The true teacher, who comes continually into contact with youth in many guises, will by that same contact and sympathy be kept young himself. He

must not let his own dreams lose their freshness lest he fail to sympathize with the rosy aspirations of the younger generation ; neither should he himself let go of sentiment and warm love. When once the milk of human kindness turns sour or fails to appear, then he may know that the vitality is failing, and the teaching and the teacher alike are past their heyday of usefulness.

The problem of unemployment is largely solved in this realm of feelings, for no one with the positives duly developed could fail to find his work in a world that is starved for lack of such characters. A man with these is a leader of men, and a teacher so equipped will probably be a teacher of teachers.

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The Will, in a general sense, is the true self, making its influence felt by co-ordinating and pointing the whole of the energies towards a desired end. Although we have classified it as a function of mind, it would appear to be something more than this, for it involves the action of the whole of the departments of mind under a central authority. The mind can hardly be said thus to govern and direct itself, and so we are forced to the conclusion that there is something superior to the mind which is quite definitely and purposely using and directing it. We believe that the central self is spirit, and this points to the idea that in Will the real spiritual self is making its authority felt over the mental equipment. So much for Will in a general sense.

In a more limited sense we are aware of what we term an Act of Will, and this works in with the feelings directly, and has four steps. In the first of these

we think of a thing. Nothing can ever be done without previous thought, for even those things which we say we do without thinking are accomplished by the automatic working of habit, which is itself the result of stored-up impressions. In the second step we refer to our feelings, and in the third step we decide. Now the importance of the feelings is just this, that in the great majority of our problems in life we find our decisions dictated by these feelings. There are really very few things settled as purely intellectual propositions, the element of emotion creeps in where perhaps it is least expected or suspected. So when we refer to our feelings, as to a judge for his decision, it is of the utmost importance that the feelings themselves should be sound. If we look to an unjust or biased judge for a wise decision we shall look in vain ; consequently, if the wrong feelings are uppermost, our reference to them will simply furnish us with an unwise or a perverted decision. This is why those people who are wrongly adjusted find that everything goes wrong with them, and that all that they do turns out badly. It is not life, but their judgment of life, that is at fault.

Decision follows then upon reference to feelings, and immediately upon decision should result the fourth step—action. There are, however, some people who have carried indecision to a fine art and who seem constitutionally unable to settle things for themselves. They decide a thing and then wonder if their decision was right, then they reverse it. Having reversed it, they are not at all sure that they were not right after all the first time, so they reconsider their reconsideration, and finally reduce themselves to such an absolute

state of muddle and wobble, that in despair they turn to someone else and say "what would you do?"

Decision, having once been made, should forthwith turn to action. This is the essence of what we call strength of Will. It is even better to act upon a decision that may ultimately prove to be wrong than to allow the decision habitually to be ineffective. If the action be wrong, we shall be likely to decide more wisely on another occasion, and we shall certainly have learned something. But if we merely promote a habit of indecision we are allowing our Will power to evaporate at a most alarming speed. These four steps of Will should follow one another in such complete and ready sequence that the whole thing takes place almost in a flash. Then the individual is said to have a strong Will. If the question of deciding remains troublesome, it is more strictly a matter of judgment than the Will; there has, perhaps, not been sufficient practice in the contrast of ideas to enable a decision to be both speedy and accurate, and therefore attention must be paid to the steps of thinking. In this way again we see how the efficacy of the Will is bound up with that of the Intellectual faculties, and how the whole mind works together as one.

CHAPTER X

MEMORY

MEMORY, like the Will, has a general aspect as well as a particular. In the general way everything about us is memory ; the walk, carriage, and bearing all reflect the past run of the thinking. If we have been ill, there is an enfeeblement and lack of vitality in our bearing which may be considered as the memory of our illness. Our face wears its customary expression which is according to our disposition and to the general trend of our past thoughts. The expression upon our face does not occur by accident nor usually by design ; it is carved by the growth of the muscles we habitually exercise, and if we frequently exercise those muscles which contort the face to a bad-tempered expression, then forthwith memory writes bad-temper there, plain for all to see. Our handshake and our speech again tell the nature of the mind, and whether it has been accustomed to think strongly or weakly, clearly or in muddled fashion ; and in this way everything in our person testifies in some way to our past.

Memory must be distinguished from Recollection, for Memory, as we stated in an earlier chapter, in the sense of a collection of impressions, is perfect and needs no training. Recollection is, however, frequently faulty and can always be improved by the requisite attention,

and when we speak colloquially of memory it is recollection that we more truly mean.

Recollection is a function of the nervous system, and the nervous system is part of the body; therefore, if the nervous system is to work well the body must be in a fit condition. None of our mental operations can be adequately carried out unless the bodily health is kept up to par. It is for this reason that we have already devoted one chapter to the consideration of health matters in general, but we would especially emphasize the fact here that, if a person is not careful to keep the bodily machine tuned up and in good order, he cannot expect any of his mental operations to be other than unsatisfactory.

Coupled up with this question of fitness is the point of fatigue. This is the result of the production of a toxin or poison arising from the breaking down of tissue, and every piece of work done, whether mental or physical, has thus to be paid for. This poison seems to have particular effect at the synapsis (the place where the nerve joins into the muscles), and its effect is to slow down the passage of nervous impulses. As a consequence, when we are tired the incoming messages of the senses are apt to be blurred and slow, while the outgoing messages may be ineffective or imperfect. Thus it is that when we are tired we make mistakes. The muscular adjustment is, perhaps, not quite as perfect as we intended it to be, and so we play the wrong note, or perhaps we misread a symbol and play a sharp instead of a natural. In much the same way it is found that accidents in workshops are most prevalent in the later hours of the day when fatigue is manifesting itself

The only remedy for fatigue is rest, or change of occupation, so that new brain centres or a new set of muscles come into action. Left to itself, a fatigued centre soon recuperates, but it is worse than useless to flog the tired horse and by an effort of will to make oneself work after the fatigue limit has been reached. The probable result may be that damage will ensue, and in any case the quality of the work done will be third-rate. Fatigue, it may be noted, is Nature's protection against the harmful results of over-exertion, and we are wise if we take heed of her warning.

Memory may be likened to the reproduction of the record on the gramophone, and the simile is apt. The record retains the impression of the actual sounds received, and when we place it on the machine we get the reproduction, so that the record and the reproduction are really dual aspects of the same thing. In the same way the impression on the brain constitutes the record and when we place the record in the brain-machine, by vitalizing it and bringing it into consciousness, we get a reproduction or a "memory." It is not possible in any case for the reproduction to be better than the record, and whatever flaws or imperfections may exist must surely come out in the reproduction. Exactly in the same way our memory is almost entirely dependent upon the keenness and clarity of the original impression; if the impression was faint, then the memory will be elusive; if the record was faulty, memory must be correspondingly imperfect. It follows, therefore, that the utmost care must be taken over the way in which the impression is recorded. The prime necessity being keen attention and concentration, hazy

impressions that have no more substance than tobacco smoke are of no use whatever. Should we try to recollect such, they will be apt to prove as elusive as those clouds of nicotine. We need clear and accurate definition for our impressions and there will then be no difficulty in recollection.

Following closely upon the heels of Attention comes Analysis, for we can scarcely observe an object clearly without at the same time noting many points that had eluded a cursory glance. We see more and we see better, we multiply our concepts of that object and so know more about it and, knowing more about it, we also shall remember it better. If we take some common object for our analysis, such as a coin, and study it carefully and thoroughly, we shall probably be amazed to find the number of points about it that we have never observed before ; we shall certainly have a more lively recollection of that coin henceforth. The same considerations apply also to the study of music or any other subject ; analysis is always necessary as a preliminary to knowledge and efficient memorization.

The next point is that of Repetition. When an impression has once come into mind it leaves its mark, but there may be fifty thousand other impressions entering during the same day which also leave their mark, and although our original record is not wiped out or erased, yet it may quite easily be swamped by the succeeding rush. It is therefore advisable to engrave the impression we wish to remember more deeply by repetition. We impress the matter on the mind two or three times before dismissing it, and, if possible, after the lapse of a few hours we review it again. This helps

to make its mark more incisive and so adds to the ease of recollection. The most favourable time for thus reviewing a topic is just before going to sleep at night. The subconscious never sleeps ; and one of its natural functions seems to be that of tidying-up, sorting, and assimilating the mental material that has been acquired during the day. Everyone has noticed how a subject that overnight seemed hopelessly involved and complex is frequently rendered quite clear by the morning ; this is because the subconscious has been busily at work on the subject while we have been asleep. It seems possible to make practical use of this natural faculty, and by a final review to attune the subconscious so that it works for us in the hours of the night. The essence of the proceeding is that it must be an unconscious process during sleep, there must be no semi-conscious worrying or dreaming about the matter.

One of the conditions of a reliable memory is that it must be used. Subtle suggestion is always at work, and if we entertain the idea that our memory is unreliable, then so it will be likely to prove. Similarly if we think ourselves unable to digest this or that article of diet, the inability to digest it will in all probability follow. Use and development is Nature's law, applying perhaps more to memory than to most things. The memory strengthens as we lay burdens upon it and grows more efficient in proportion as we use it. Shun at all costs the advertised advice put forth by publishers of Diaries to " Johnsonize " the memory, and do not be content to have memory depending upon stray envelopes, slips of paper, knots in handkerchiefs, or scribblings upon shirt-cuffs.

Memory's part is to remember, and this duty it should be rigorously schooled to perform.

Nothing that we can be called upon to remember is entirely devoid of meaning, and where that meaning can be established the act of memorizing is rendered so much the easier. A verse of poetry may be committed to memory quite easily, but the same number of words taken at random from a dictionary may be ten, twenty, or thirty times as difficult. A row of twelve figures in no particular order, such as : 387352690472 could be fixed in mind by a certain amount of effort ; but supposing that we can find some meaning in these figures, as, for instance : 1066, 1215, 1923, then the same number of figures can be grasped in a tithe of the time. Or again, supposing that the figures represent a sequence such as : 12345,23456,34567, etc., then at the same glance we could grasp almost an indefinite number of these figures at once, because we have realized their meaning from the plan upon which they are constructed.

We are here concerned with a very important principle in that we " enlarge our unit." In the first instance the unit was the single figure, in the second case the unit was a group of four figures, and in the third a five-figure sequence. While we are compelled to think and work in small units our efforts must ever be laborious and limited, but as soon as we enlarge the units we get along very much faster, and the larger the unit the quicker and more comprehensive our progress. This applies not only to figures but in many other directions, and especially in musical work. A beginner in music is necessarily concerned with the

small units of single notes and tones. Presently, growing familiarity with larger units in the shape of chords, arpeggios, scale passages, cadences, sequences, etc., will enable him to proceed at a much faster rate, while the knowledge of the harmonic and melodic structure, and form, will also help to make the meaning increasingly clear. We have frequently found that people who complain of their inability to develop their musical memory are compelled to deal with the small units by reason of their lack of theoretical and harmonic knowledge. Until these folk are able to grasp the meaning behind the printed notes they cannot possibly hope for any striking success in musical memorization.

Association of Ideas is the next point to which attention must be paid. The essence of application is that, when two ideas or concepts have once been connected in mind, that connection is permanent, and the vitalizing of the one in mind tends to bring up the other. When we think of heat, the idea of cold may be brought up by contrast ; when we think of Christmas, the idea of pudding or of holly may come into mind, and so on. Ideas may be connected by any kind of link, but, whatever that tie may be, its tendency is to persist. When a serious verse has once been aptly parodied we know how difficult it is for us ever to take it again in its original serious intent, so also are nonsensical names and phrases apt to stick. The obvious rule then is that we should refrain from making undesirable associations, and should endeavour to form those that will prove helpful. It certainly does not assist us to associate work with boredom, for then as soon as we so much as think of work we are tired ; but if work

be associated with pleasure and privilege, then we may just as surely be pleased at the thought of it as we were before disgusted.

This principle of association is the basis of all effective teaching, for the new idea must be linked on to the old, and the more links a thing possesses in mind the more deeply rooted is it. Every idea is in point of fact linked with something else, but if we can associate the new idea with two, three, four, or a dozen other things, it will be the more soundly established. It should be the aim of the teacher to work from the things known to the unknown, and so on in an ever-widening network of knowledge. The value of a timetable is based upon the same principle, for here we link the things that we desire to remember on to the things that we cannot forget. Ten o'clock and eleven are times that come round independently of our volition, and if we link up ten o'clock with the study of one subject and eleven with that of another, then we shall have the best possible chance of getting these particular things done. If, however, we hope to do them some time during the morning, we shall probably find that they are missed owing to the indefiniteness of our arrangements. Association in the daily round promotes efficiency.

An exercise we should suggest for memory training is that of "remembering back." For this we require pencil and paper, and we take some particular topic for consideration; this may be a book, or perhaps some short period of time—say, the ten minutes that elapsed before breakfast. We think ourselves back in mind at the beginning of that period, and recall the things that we did and thought; probably we shall be able to

put down at once half a dozen things that spring to mind. Then we take the first of these heads and allow the mind to think round it, and presently we may be able to bring back five or six associations of that one thing alone. Having jotted these down on paper we then follow the same process with the second point and the third, and so on to the end, and by this time we have probably recalled some thirty or forty points. Next we take the first of these secondary headings and go through the same expanding and recalling process with each in turn.

This may take some time, but we shall certainly be astonished at the extraordinary mass of material that we have taken into consciousness, which we really did not know we knew. There is no exercise which can more amply demonstrate the vast mass of information which exists in mind. In this way books, lectures, and lessons can be recalled, with the result that their messages are many times more firmly established in mind, and their value to the student or the teacher is immensely increased. If due attention is paid to these simple points in memory, there should, after a little practice, be little cause to complain of any difficulty in the ability to recall at will.

CHAPTER XI

IMAGINATION

IMAGINATION, contrary to the general idea, is an infinitely practical faculty. It is associated in many minds with all that is poetical, abstract, and inconsequent, though, as a matter of fact, there can be no more useful gift than an imagination that works soundly. If we were to term it a faculty of "imaging," that is to say, of building mental pictures, we should probably realize it more truly for what it is.

An imagination controlled, as we shall show, can be of the greatest use, but hardly anything can do more damage than an uncontrolled imagination. Mental pictures are at the basis of everything that has ever been built, fashioned or constructed, designed or achieved, both good and bad. Things cannot precipitate themselves, they must be made to a plan, and that plan is surely a mental picture or an effort of the imagination. If the mind be allowed to fashion undesirable pictures, then it just as truly sets in possible motion a train of undesirable happenings and works damage. We all know those people who allow their imagination to run away with them, picturing ills that never come and slights that have never been intended, and whose vision anticipates unpleasant events that are never likely to take place; these folk

have their mental pictures at work sapping their vitality, and destroying their nerve or peace of mind. Such a course, consequently, cannot be too strongly deprecated. Those who have come across sufferers definitely over the border line of sanity, obsessed by a fixed idea, will know how a perverted imagination can construct a mental picture of such strength and fixity as to outbalance reality itself and definitely to derange the intellect.

But if the imagination negatively can work such damage, when turned to do constructive work it can accomplish it just as thoroughly and as well. The business man who possesses imagination prospers, while the other person without it stagnates ; the former sees countless opportunities where our unimaginative friend sees none. Our great businesses to-day are simply monuments to the imagination of the man whose energies built them. Had that individual been content with the small beginning, and had he continued to let his thoughts run in the same small groove of limited activity, the great store or business could not possibly have come into being.

Imagination is a specifically human gift, and constitutes the inner vision which can transcend reality. We can see things as they are, but we can shut our eyes and mentally picture them bigger or better. This is the first rung of the ladder by which we climb to greater heights. The animals do not possess this faculty of abstraction, or constructive inner vision, and therefore they remain animals ; but if a dog could picture himself as a super-dog with the power of constructive thought at his command, there seems no reason why in the course

of several thousand years he and his like should not become something like the super-dogs of their mental picture. While the dog cannot do this, his evolution must proceed at an infinitely slower pace.

In the musical world the person devoid of this saving grace of imagination is completely at a discount. Where the interpretation is entirely without imagination, few will be found to listen ; and while the singer has nothing of mental vision in his rendering, not many will remain to hear. The composition without imagination is sterile, and the teacher lacking the imaginative faculty is likely to find his work little less irksome than will his pupils. The Conductor devoid of imagination will be " stodgy " and unable to inspire his forces, and the artist in any department in the absence of this special gift is but poorly equipped. We need therefore spend no further time or words in pointing out the utility and necessity of this power of mental vision.

In developing the imagination, attention must first be paid to the reconstructive side ; that is, the power resident in ourselves to invest another person's imagination with our own vitality. Everything possesses an outer form and an inner spirit ; and Music especially exists in its letter and formal sense, and in its spiritual content. Reconstructive imagination then in music means the ability to get behind the actual sounds and to revitalize the composer's imagination which he has endeavoured to pinion in his notes. If we can play or sing the spirit of the composition, we are musicians ; lacking this ability, we may not claim that title. So it is also with all work in Art, the technique is but the vehicle to convey the message of the spirit, and

where this is not reached or not conveyed the Art is sterile.

As a test of reconstructive imagination we might ask ourselves if, when reading a book, we have a clear mental picture of the scenes described and the individual portrayed, or do we read merely words. There are great variations of this power of visualization which is more truly reconstructive imagination, and those who do not possess it well developed should spend some time in endeavouring to secure it. The words that we read presumably have a meaning, and therefore that meaning ought to be present in our mind in the form of a mental picture. We ought actually to be able to see the place which is being described ; and the characters, if well drawn, should be living human beings for us. In this way we read the spirit rather than the letter.

In looking at a picture we ought to be able to imagine ourselves viewing the original scene as through the eyes of the painter ; and we should have the power to reconstruct his feelings and emotions as he gazed upon that scene ; this is to get into the spirit both of the painting and of the painter, for the picture was truly a part of the artist. Looking through photographs we may endeavour to get behind the actual portrait and to re-vitalize the feelings of the sitter. If for a moment we adopt the facial expression of the subject, we shall find that it probably induces some reflex action in mind, bringing up a corresponding emotion, and we can get some inkling of how the sitter must have felt to have adopted that pose and expression. Thus in a measure we arrive at the spirit of the photograph, and through the photograph also of the sitter. This type of exercise

can be extended indefinitely, and after a little while we shall find that we are truly developing the power of getting behind the formal presentation of things to the spirit that animates them, indeed a most valuable form of training.

Technical exercises in reconstructive work in connection with music will at once suggest themselves. If we depict the sound of a human voice singing middle C we may imagine it first as sounded by a female voice, then by a male voice ; then we can picture it played on a violin, subsequently on a flute or any other instrument. But until we can carry through a simple exercise like this with clearness and accuracy we are not very far advanced in our imaginative work, certainly not far enough advanced for any real constructive effort. Further exercises will be given along these lines when dealing with musical memory which is so closely allied to reconstructive imagination.

If, then, we have developed the power of being able to refashion someone else's vision from the music, words, drawing, or whatever form the technique may take, we shall have laid a ground-work for constructive imagination ; and here we endeavour to make our own original mental pictures. These pictures are visualized ideas, and it will be recalled that the basis of an idea is the coupling of concepts. An original idea is the coupling of concepts that have not before been connected, or else their arrangement in a fresh way. In the musical world we have unlimited concepts with which to work. We may take a rhythmic concept or figure and couple it with a melodic concept and at once we have a new idea and the possibility of an infinite number of varia-

tions by the modification of these concepts. With all the resources of rhythm, melody, harmony and counterpoint, with their unlimited range of concepts at command, no boundaries can be assigned to the work of the active musical imagination.

In the course of the systematic process of coupling concepts we shall come across an extraordinary number of new ideas, but the great bulk of them will be useless and may at once be discarded, but it is more than likely that every here and there we shall come across ideas that are deserving of more consideration. These, or some of them perhaps, it may be worth while to follow up. As concrete instances of what the imaginative idea has done to assist the world we may point out that women sewed by hand until some man came along and coupled up the concepts of " sewing " and " machine." Then he asked himself, " Why not sew by machinery ? " The seed of the idea was no sooner planted than it began to sprout, and the sewing machine has since done its part in revolutionizing the world. In much the same way we may suppose that the mechanical piano player, the typewriter, the adding machine, the addressing machine, the automatic telephone exchange, and indeed all modern inventions have come about.

It is a good plan to take onself as a concept, and to couple up the self with the virtues and the abilities of which we are envious in other people. We might take the concept " myself " and couple it up with the virtue of being good-tempered. The idea of the self being good-tempered is very likely entirely new and astonishing to some people, and these have all their lives been bad-tempered simply because their imagina-

tion was not equal to the constructive effort. The seed of this idea, nourished and fostered by the power of thought, can certainly be made later to blossom in the life of anyone who will take a little trouble along systematic lines. Without labouring the matter further it will now be obvious that we can set our inner vision to work, and by the power of constructive imagination do much of value for ourselves.

We have seen that in the subconscious we have a veritable gold mine of information and inspiration, but there is little use in having the mine unless we are prepared to make use of the gold. One reason why the average person makes so little use of the gold that he undoubtedly does possess is because he keeps his conscious mind at such a high degree of tension that the subconscious never really gets the opportunity of telling him about his treasure. We shall see later on how necessary it is in systematic study to allow ideas to fructify and link up in mind, but we may further suggest that opportunity should be given for this subconscious growth to emerge into consciousness. A daily period of quiet thought as an opportunity for the awakening of imagination is of great use, though we certainly must not be understood to advocate any aimless sitting in the dark or anything of that kind. A few minutes' toning down of the rush and bustle of our strenuous life is, however, highly advisable if we are to allow our imagination to inform us somewhat from its store of treasure.

CHAPTER XII

APPERCEPTION

It will be remembered that in the chapter on Thinking we pointed out that material first enters the mind through sensation, that Sensations are stored up as Images, and Images are combined to form Concepts. This stock of concepts is termed the Apperception Mass, although it must be clearly understood that there is no " mass " about it at all. It might perhaps render the matter more clear if we thought of this stock of concepts as a self-compiled dictionary of experiences. When we turn up any particular word in the dictionary we are referred to all the previous experiences and sensations we have had concerning that particular thing. If we turn up " apple " we find that it was something that was round, smooth, and yellow, that tasted and smelt so and so ; all this matter flashes into mind with incredible speed in answer to the key-word " apple."

An interesting point immediately arises here in that our experiences are peculiarly our own and unique ; our dictionary cannot possibly be like that of anyone else in its entries, for they are made of our purely personal experiences. Nobody could possibly have duplicated these, and therefore no dictionary can have the same entries as our own. All our sense messages are occasioned by the receipt of impacts or vibrations

from without, and when these are received by a sense area they send a nerve stimulus to the brain. But this stimulus is merely a nerve impulse, like an electric current along the telegraph wire ; it is not sense until it has been decoded and translated at the receiving end. So, upon the receipt of one of these messages the brain promptly refers the matter to its own experience by turning up the topic in the dictionary of concepts, and thus translating the message. The translation, therefore, is the all-important thing. But we know that, if we had to translate a Latin passage four times by the aid of four differing dictionaries, the passage would wear four varying aspects, each according to the particular dictionary. The case is very similar when four people look at the same thing ; they can never see it alike, for each will supply a translation according to the bent of his own mind.

Let us illustrate this point by reference to a musical composition. Four people listen to the same thing, but one has chiefly a stock of melodic concepts because he has been accustomed in the past to think in melodies —he hears principally the melody. Another has harmonic concepts and hears mainly harmonically ; yet another has rhythmic concepts and hears accordingly, while the fourth has chiefly emotional concepts and hears in those. These four (though the same might apply in varying proportions to forty, or four hundred, others) translate the same thing each in his own individual way and what they hear is vastly different, although the ear machinery probably transmits exactly the same vibrations in each case. So, in looking at a picture, one may look for the drawing, another for the

colouring, a third for the message, and a fourth for the technique: each translates the nerve impulse in the light of his own "apperception mass."

It will be clear then that it is impossible for us to see or hear, or generally to interpret our sense messages alike. Here we have the psychological basis for difference of opinion, and there is little need for us to worry about people who differ from ourselves. A person who has been brought up in Liberal circles and has a Liberal stock of concepts must necessarily interpret all he hears and sees in a way that would be entirely foreign to one with a stock of Conservative concepts, while a Labour man would differ most materially from either. The worker, having such a vastly different experience from that of his employer, cannot be expected to view matters from the same angle; and, however sympathetic the employer may be, he cannot interpret things to himself as they appear to the worker. Just this simple psychological explanation should do more to remove bitterness from discussion, and to make it easier to find a common ground whereon both sides may meet to find a happy issue out of their deliberations.

The teacher will at once grasp the significance of this point in education. He himself has a well-stocked apperception mass, compiled out of wide experience and comparatively long life; the pupil has a very attenuated dictionary, for he has had but a brief life and possibly no experience. Indeed, his dictionary at the commencement is entirely devoid of entries, and in no case is it more than a very meagre one as compared with that of his teacher. It is therefore most obviously necessary for the teacher to give his tuition in the

pupil's dictionary rather than his own. He may talk excellent sense, but it is to no purpose if the pupil be unable to understand; and this he cannot do unless his own experience has supplied him with the necessary concepts. Lack of these concepts frequently causes much otherwise excellent teaching to fail entirely, and we all know clever people who are shocking teachers, very often just because they are unaware of the poverty of the pupil's stock of concepts.

The first thing to be done with a new pupil is to find out just what he possesses in the way of concepts in the mind, "just what he knows," then we can proceed to link on what we want to teach him to what is already there, making the organization of his mind on the lines of a network as we proceed. If we fail to take this elementary precaution at the outset, we may find that the pupil is indeed understanding, but in his own concepts, and with a consequent distortion and perversion of our meaning. A class of small boys was once having a lesson in Roman History, and the teacher had been dealing with the point that Tarquin had taken hostages from Rome. Everybody seemed thoroughly to understand, but in order to test whether the knowledge was being taken in (always a wise thing to do at intervals) they were asked why Tarquin should want these hostages. One little youngster was prompt with his reason which gave a clue to the run of his thoughts when he said: "Please sir, to get feathers from!" Ostrich feathers, indeed! This was a lesson which the teacher has never forgotten, and it is because teachers are very prone to over-estimate the understanding of the pupils and to assume more than the facts warrant, that special

emphasis needs laying on this point of the apperception mass.

All teaching must thus be carried on in the light of the pupil's dictionary, and if this has no entries we must first proceed to make them before we go further. This is precisely what the musical appreciation movement aims at doing ; before a child can understand anything it must have something with which to understand, hence we must begin at the beginning. This seems an elementary thing to say, but it has more or less been consistently overlooked and neglected in the past. The beginning of music will probably be centred by common agreement in rhythm, therefore an appreciation or apperception of rhythm will be the first step. Here the duality of things, two legs that walk, two arms that swing, and so on, will give a very clear idea of the elements of the notion. The tick-tock of the clock will tell us that it is very hard to listen for long without finding an accent on either the tick or the tock, so that we get one pulse stronger than another, thus travelling from rhythm to accent, and from accent to time. In the same way pitch may be dealt with ; what is the difference between high and low sounds ? From pitch on to intervals, and then to scales, melodies and so forth.

It does not come within the scope of this book to deal with any definite scheme of musical instruction along appreciation lines, but there are many manuals which go thoroughly and exhaustively into these matters, and to these the teacher may be referred. But we would certainly wish to point out that this is the only rational way of commencing an education in

music—or indeed in any other subject—to begin at the beginning by furnishing the mind with concepts which it can understand, utilizing these as starting points for further growth.

The apperception mass in music is being enlarged at a very rapid rate as soon as the listening to music is begun, and bands, gramophones, pianolas, and wireless are all means for the acquiring of further concepts. In the general aspect of mind-growth we dealt with concepts of concrete objects or abstract ideas, but quite obviously musical sensations result in musical images in the mind, and these again are grouped and combined into musical concepts. If we combine a rhythmic concept with a melodic, we get a musical idea (as we showed in the chapter on Imagination) and this is the only way a musical idea can come into being ; and it is from the stock of concepts accumulated by the experience that the material for future extemporization or composition can be obtained.

Furthermore, all the senses will have their own apperception mass of concepts ; it is not only the ear that must be trained, but also the eye, and the muscular senses of touch-discrimination and of pressure. All these, too, must be habituated to co-working and co-ordination, and then the mind becomes a delicately adjusted mechanism for the reception or the generation of musical ideas, and for their assimilation or passing into expression.

CHAPTER XIII

HOW TO STUDY

It seems an extraordinary thing that, while we are sometimes taught to teach, it is very seldom that we are taught how to learn. Comparatively little attention has been paid to the conditions necessary for the systematic study of a subject, and most of us simply "pick things up" in a more or less haphazard manner. We therefore propose to enumerate some of the essential conditions.

In the first place, as we started by saying in Chapter I, it is necessary to have a motive, and that motive must be the ideal of service to others, to the world at large, and particularly to those who happen to be in contact with us. We do not study merely that we may obtain knowledge, but that the knowledge we may acquire may be of use to others; our knowledge, learning, and our skill are to enable us to do more and better work. This motive is to act as our fly-wheel to keep us steady in our progress, or as a gyroscope to hold us true to our course; it is to make things worth while. As we get on in life, the great and growing interest in our work will very likely supply an entirely sufficing motive-power to maintain our progress, but in the earlier stages when perhaps the interest, enthusiasm, and momentum, have as yet not been acquired,

we must set our ideal before us to be our inspiration and incentive.

The second step is to furnish the mind with the necessary food for growth, to acquire our mental stock-in-trade ; and this we are doing all day long, for all is grist that comes to the mental mill. There will be many ways of securing the necessary material ; teaching will furnish it at a rapid rate, as also will private reading and study. Lectures, discussions, and debate, will provide much mental food. In the musical way there are various periodicals and reviews, and worthy articles in many of the more serious newspapers : all these contribute their measure of information to the music-seeking mind. Then there will be concerts and recitals, Musical Festivals, and orchestral and choral performances, so that there is truly never any lack of means by which we can get material upon which the mind may thrive. It may also be added that, with the development of our own powers of taking in, we can learn to acquire from these various sources far more than the ordinary non-trained observer, and therefore the quicker will be the rate of growth.

But it is by no means sufficient for us to spend our days simply taking in everything that the mind happens to come across ; this would serve but to make the mind a lumber room of haphazard impressions, instead of a methodical and well-organized workshop. All study involves the element of criticism, and criticism necessitates both acceptance and rejection. So long as the human mind is constituted as at present there must be conflict of opinion, and the learned will continue to disagree upon every subject under the sun. But

precisely here do we develop the critical faculty by deciding the final issue for ourselves by the exercise of our native wit and powers of judgment. If we take the topic of voice-production, as an example, we shall find splendid conflict of opinion as to method on the point of registers or no registers, breaks or no breaks, falsetto or "head" voice, abdominal or clavicular breathing, "coup de glotte" or none, and so on to an indefinite extent. Are we to take all or any of these into mind just because the theories have been put forward? Quite obviously study must imply an intelligent and wide-awake critical faculty. But the criticism must be intelligent rather than arbitrary; therefore in studying a subject we should endeavour to get various angles of view, weighing up differing arguments and paying special attention to the opposition case. Where statements can be tested personally, they should be so treated, and this alert discrimination should, as it were, take the place of a sieve stationed at the entry to the mind to keep out irrational and unworthy information.

After selection of our material the next step is its incorporation in memory, for it is little use having acquired our information if we cannot draw upon it for use from memory. As we have already enumerated the general conditions for memory, it is scarcely necessary for us to deal with this further. But, whatever we may decide to memorize, we should clearly distinguish between essentials and non-essentials, between principles and details. We should always try to get the principles and outline perfectly clear. Details, of course, possess importance, but principles without details are far more

valuable than details minus any structure to mark their bearing or import. As in playing music at sight it is far more necessary to get the harmonic structure intact than it is to have every note correct in its proper place: it is far more important to keep the time going than to have an incorrect detail put right before proceeding to the next note. These considerations of study, purely general as they are, have their application in every subject; the principles hold good, though the details may vary with each topic. Again we would suggest that the best way to test our memory of a subject is by reproducing it. Frequently we think that the knowledge is in our head; so it may be, but can we get it out? Only too often it exists in such a nebulous form that we are unable to put it into any useful shape. An invaluable exercise is to reduce information to writing, and to test impression by expression. When we have done this, our knowledge is a far more serviceable thing, being definite and concrete. It hardly matters whether we keep what we have written or consign it to the waste-paper basket, the value remains permanently in mind.

In studying from books it is a useful practice to side-line in pencil the noteworthy passages, and to underline the specially important. If a record of special points, with pages on which they occur, is put on the last fly-leaf of the book it serves as invaluable help in reference, saving much time: this can be done as the book is read. Many things have, however, to be put on record which it is not necessary to keep in the head; these items may be put in a card-index, as a kind of mechanical memory. Press cuttings and quotations can be

put in ordinary business envelopes and numbered consecutively ; these envelopes can be filed in a 6 in. by 4 in. card index cabinet, while the numbers are entered up on an alphabetical index under subjects. In actual practical use this proves an excellent method of working a mechanical memory.

We are told that we should " think as much as we read," this means that if we read for half-an-hour we should spend the same time reflecting over the information. In these busy days the advice is a counsel of perfection, but the principle is sound ; for as soon as we commence thinking from a certain point as a centre, like the sun, immediately one association and then another leads us off on a planetary orbit of some kindred topic. Ideas begin to branch out and fructify, and if we are willing to do our thinking on paper, working out logical deductions from the material set down, we shall find that our thinking is an essentially expansive process. If we ask ourselves questions :—why ? why not ? how ? what for ? and so on, we shall, indeed, be surprised at the result. We shall learn that information is not only to be derived from outside sources, but that we already have a vast store within which can be drawn upon and worked up into fresh material.

This process is analogous to that of cell-growth by subdivision in the body. We take a topic, say music, and we begin to divide it into two aspects—practical and theoretical. Each of these again will subdivide :—practical into vocal and instrumental, and theoretical into historical and present-day, and each of these will subdivide and divide again and again. The process has no real limit, and as a means of acquiring a real

grip in all the bearings of a subject it is invaluable. Analysis on these lines is simply the growth and expansion of a subject in mind. The teacher should make a special point of analysing the things connected with his work. Why should a pupil learn music?—this is decidedly a useful idea to analyse and expand, and when the teacher has done this he is in a position to meet the prospective pupil with ready-prepared argument and advice; if he has not so studied the point, the convincing reason may come to mind next day when the pupil has gone elsewhere.

The mind is a network, the knots are the facts, and the threads are the association that link them together. The more things are linked and associated in mind, the better is it organized; the more things are unrelated and casual, the more incompetent is the mind. Our special subject, whatever it may be, should be analysed and studied in itself, and then linked up to other topics and to life. Again taking music as our illustration, it may be linked up to history, to religion, to the drama, to national sentiment, to ceremony, to the other arts, to folk lore, to education, and to a hundred other things. It is not possible to be more than suggestive in matters such as these, but these topics will join up in a surprising manner and lead to the acquisition of a large store of new and unsuspected ideas and suggestive side issues.

Then, if we take the general laws which we find in our particular subject of study, we shall probably discover that they have analogous applications in other directions. For example, the law of sympathetic vibration in sound shows its application in the "tuning" of wireless waves, in the attunement of minds, in the con-

sonance of character and circumstance, and so on. The consideration of the laws of harmony will find parallel application in the other arts. The principles that tend to promote efficiency in music are those which also ensure it in other directions. Thus we link up into the network of the mind a multitude of apparently unrelated items and make of this material one coherent whole.

All these elements in study have but been leading up to the next step which is the re-organization of all this material into new ideas and fresh forms. Here we are really back again at reconstructive imagination, recombining the multitudes of concepts to develop new ideas. We may draw parallels to see if old rules have application in new directions; we may make deductions and speculate. If music, for instance, has altered in scope and direction so vastly in the last twenty years, what is likely to happen in the next twenty? We can send the vision out ahead, we may draw comparisons and contrasts, and in these and other ways we can work up this material in mind. In addition also there is a type of automatic working-up and assimilation going on in the subconscious part of mind, which will presently fructify in the guise of new ideas or flashes of inspiration from the self.

We may reorganize our stock of harmonies in new and original forms, we may even practise our speculations in this direction at the instrument, working out fresh combinations and devices. Our rhythms will afford endless scope for experiment, and these, together with melody and harmonic device, may be combined in extemporization. Excellent practice, too, in composi-

tion ; and here again the benefit permanently remains, even when the early, crude efforts have been thrown away. We would suggest that every pupil should from the first stages be encouraged to compose and to extemporize within his limits, and that these points should receive attention in all tuition. This applies equally to speech, and writing, as well as to music. The number of people who can utter from their own minds a coherent sentence in their own language is surprisingly small, and the fact is a scathing commentary upon their so-called education.

Performance should be looked upon as a distinct element in study ; it is truly the testing of impression by expression. Any opportunity that offers for this should be readily accepted, for one of the early difficulties in the way of this particular part of study is that of finding an audience to listen. When, therefore, one is provided, it is flouting fortune to refuse the opportunity thus afforded. There are four requisites for stable success ; firstly, self-knowledge ; secondly, knowledge of the pupil ; thirdly, knowledge of the work ; and fourthly, the application of that knowledge. This is the last step in study, but it is the one where many fail ; it is nevertheless obviously useless to know what ought to be done, if, when the occasion arises, we do not do it. Study leads to knowledge, but knowledge is only potential and not actual power until it is applied. The last element in study is therefore the utilization of the material acquired, and the true test of character lies in the use we make of it.

CHAPTER XIV

THE STEPS OF A LESSON

In the world of business there is a " Law of Sale," and probably we shall most of us recognize that at some time or other we have been involved in its operation. This " law " involves a progression of four steps ; and the first is Favourable Attention, the second is Interest, the third Desire, and the fourth Action. The way in which it works is as follows :—We enter a shop, and after we have made our purchase the assistant casually draws our attention to " this new line of goods which is just in, etc., etc." He is quite intentionally and designedly enlisting our favourable attention ; but he does not simply say what he has to say and then stop, he rather continues until he succeeds in inducing some degree of interest, and then perhaps we ask a question or two about the goods. Proceeding to dilate upon the articles, he suggests that they are just the things for us, and perhaps asks us to feel or test them for ourselves, with the direct object of arousing our desire to possess them. (Step three !) Then finally at the psychological moment he says " May I send them home for you ? " and we agree. Action ! and the " Law of Sale " has done its work.

This is what we see in the business world, but if we just change two of the terms, and make the series run :—

Favourable Attention, Interest, Enthusiasm, Climax, we shall see how universal is its application. Every successful novel is written to this formula ; the favourable attention is attracted by the title or the coloured wrapper. If unfavourable attention be attracted, we simply do not buy, and the sale is killed at the outset. Then the novel must hold our interest, and lead it on to enthusiasm ; for if the interest flags we put the book aside in favour of one more attractive. But the enthusiasm mounts higher and higher as the last page approaches, and then the climax is reached with the final situation. The book has been a good one because it has been built along these natural lines. The dramatic success conforms to the same plan ; the favourable attention of the opening scene, the growing interest, the enthusiasm and the final climax and, Curtain ! Moreover, each of the four acts (if there be four) is on the same plan in miniature, while the whole drama manifests the same plan.

Advertisements are constructed to a like formula, and the test of a good advertisement is conformity to this plan. A teacher's prospectus should be drawn up on the same lines, the favourable attention being drawn by the quality of the printing and the general get-up of the style ; cheap stationery and printing is terribly expensive, because it attracts unfavourable attention and kills business. Then the subject-matter of the prospectus must be such as to enlist the interest, and details of special methods or advantages should arouse enthusiasm, and at this point the fees are mentioned. Business letters also are written on a similar plan ; and again the question of style is of the utmost importance,

because it advertises taste or no taste, appreciation of fitness and beauty, or none.

Those who are accustomed to the drawing up of a programme will at once recognize that they have been unconsciously working to this formula all the time :— The attractive first item, the growing interest, the better wine as the feast proceeds, with the final item the crown of the whole proceedings. It is, nevertheless, interesting to realize that this is simply our old friend the " Law of Sale " in a new dress. A Symphony will be observed to run much along these same lines, being but the musical expression of this more or less universal design. There is the favourable impression of the opening movement, the added interest of the second, the working up to enthusiasm in the third, and then the Finale and climax. Each movement also within itself is built to the same pattern, an epitome of the whole.

Even so musical a form as the Fugue, it is surprising to note, is constructed along the same lines as an ordinary advertisement or a novel. The subject, chosen for the pleasing notice it attracts, then the counter-subject to add to the interest. After that the development and treatment and the general working-out of the themes to arouse the enthusiasm. Next the stretto and after that the pedal point with its piled-up harmonies and the manifold devices to quicken and excite the pulses, and the final tension of listening and waiting for the ultimate full close on to the tonic, the climax of the whole proceeding. Like the novel, we know that the ending is coming and we guess in advance what it must be, but it holds us thrilled and taut to

the very last page ; and so does the Fugue until the final note. Strange that it should have analogy in the business world !

Now let us apply this same principle to music lessons and we shall at once see that, like a good novel, advertisement or Fugue, our teaching also must follow along the same lines. The first point is favourable attention, and there are many things that can make or mar this. If a pupil has to ring twice at the front door bell his unfavourable attention is attracted ; so it may be by the inartistic furniture or pictures of a studio. A chilly welcome definitely harms the lesson, as also does a bad piano. All the thousand and one little things connected with the teacher and his surroundings are quite definitely working either for or against favourable attention, and, therefore, for or against good business, and, it may be added, good service.

Then the interest must be aroused and sustained, for if it flag, then immediately the attention begins to follow suit, and the value of the work is at once impaired. A great help to keeping the interest alive is the ability to bring sidelights to bear upon the subject being taught ; little biographical details about the composer, his place in the history of the art, what he owed to his predecessors and what posterity owes to him—points such as these make the work more living. For this a wide range of knowledge is called for on the part of the teacher, and he must possess a wide margin of information over and above that which he is actually called upon to impart. Change in the manner of presentation of the subject, and little points of information that crop up in the linking up of music and other topics, all

these go to ensure that the teacher is able to work the interest till the glow of enthusiasm becomes visible.

Enthusiasm may be stimulated and sustained by performance at minor concerts and Students' Evenings, and also by attendance at concerts where the pupil may copy the best models and be stimulated by the spur of competition. Musical Festivals have great value in this direction, and Examinations (though we are by no means blind to their abuses) have their usefulness. It is always easier to work with a definite objective not too far off, than with the hope of honour and glory in the remote future. So the wise teacher will take every means himself, in addition to the suggestion of various books that may profitably be read and periodicals that may be taken in by the student, to keep the enthusiasm growing until the climax of success be attained. Each lesson can be a definite success in the attainment of a limited objective, each term in the reaching of a longer mark, and the whole of the teaching period in the culminating success that marks the beginning of a career.

Each lesson should be a link in a chain ; those lessons which consist merely in the teacher "hearing things through," with or without comment, are missing the mark. The teacher should have some definite plan, with definite information to impart at each lesson, and it ought to be possible to feel that at the end of the half-hour something has been attempted and something done. It is not necessary that the details of a lesson should be planned in advance, but the outlines certainly ought to be definite ; when this is so, the details

are best left to the mood of the moment and that of the pupil.

Something for the muscles, something for the intellect, and something for the emotions should be comprised in each lesson; to specialize on one of these to the exclusion of the others is to destroy the requisite balance and impair the result. Work for the muscles will be represented by the purely technical part of the lesson, and by the special exercises designed to meet individual difficulties. The intellectual work will comprise the study of classical works, with all the collateral lines of study, *i.e.*, historical and critical, biographical and structural, that they suggest. The emotional side is met by the music of the Romantic and poetic composers. But we cannot be all romance and emotion without becoming sloppy and sentimental, neither can we be all classics without incurring the danger of becoming academic and austere, while too much exclusively technical work will be apt to dry up all the fountains of inspiration, leading us to run the risk of losing sight of the music altogether. Balance, sanity, and proportion are the necessary ingredients in every lesson, as in every teacher.

CHAPTER XV

REACTION TIME

By reaction time is meant the interval that elapses between the receipt of the nerve stimulus and the action that occurs in response. The length of this interval varies widely according to the individual and the circumstances. As a very rough and ready illustration of reaction time measurement, there is the old experiment of getting, say, ten people arranged in a circle, with the right hand of each pressing upon the head of the one in front. At a given moment number one presses upon the head of number two, and as soon as he perceives this stimulus he passes it on to number three, and so on all the way round. If the total time be taken from the first simulus to last reaction and is found to be six seconds, then the average reaction time for each of the ten individuals will be six-tenths of a second.

By modern methods, however, reaction time is measured with a minute degree of accuracy, and it has been turned to very practical use. As an example, a Tramway Company had its drivers tested for the speed of their reactions and then they were graded accordingly, and this grading was compared with their accident records. It was found that those drivers with the slow reaction times were just the ones that had the bad

accident records; in the emergency they were just too slow for safety. But this means that, had the grading been carried out before the accidents occurred, those men with the slow reactions could have been put to work at tasks in which the safety of the public was not involved, and so, humanly speaking, the accidents could have been avoided. In this way also aeroplane pilots were tested during the war, and many who would have been a danger to themselves were ruled out.

Age is a fact that has a great bearing upon reaction; youth reacts quickly, reaching its maximum speed perhaps in the early twenties and then gradually slowing down with advancing years until the deliberation of old age is reached. Consequently we see the necessity of getting pupils young, for they are then naturally quicker in the uptake than those of mature years. This quickness can be made habitual by exercise, and then the onset of age does not reduce it to anything like the same extent as in the untrained person.

Another factor of influence is environment, for we see that the town-bred child is quickness itself as compared with his slower, country-bred brother or sister. His exacting circumstances compel him to quick thought, quick decision and action, under the penalty of his coming off very much the worse in the struggle for existence. So also a child brought up in a large family learns the necessity for speed in thought and action far more than one brought up alone: this also is the advantage of being taught in school and classes as compared with private tuition. Competition calls up our latent resources and speeds up our reaction

time, so that we become more efficient and more alert individuals.

Training and exercise have the effect of shortening the period of reaction, and a sprint runner gets off the mark much quicker than a long-distance man. The start in a hundred yards race is everything, but in a couple of miles it is not of nearly so much importance: so the sprint runner practises his starts over and over again until, crouched there with his "ready-prepared reactions" he gets off his mark like lightning at the sound of the pistol. This quickness is an asset in general life, and the slow thinker and tardy actor is always at a disadvantage with his more alert competitor in any walk of life. Exercise renders an action habitual, and when it is stereotyped its speed will remain and may even increase.

The element of choice results in an appreciable slowing down of reaction. We are called upon to decide, and the action cannot follow until the decision has been reached. If we have to debate in sight-reading as to whether a note is a sharp or a natural, then the practical result is a hesitation which shows itself in a momentary slackening of the tempo. In the army, for this reason, commands are given as "Left . . . Turn!" with a distinct interval between the words of command. The first word is given, and then ample time is allowed for each man to determine which *is* his left, and then all turn simultaneously at the word "Turn." It takes some men longer than others to decide between left and right, and, were this interval for choice not given, there would certainly be no simultaneous action. Temperature is another thing that has an effect on

reaction : there is a normal rate of nerve impulse at a normal temperature, but a lowering of the temperature results in a slackening of speed. Cold-blooded creatures, like frogs and lizards, are habitually much slower in the transmission of nerve impulses. But of ourselves we know that sometimes we feel almost " too cold to think," and it is a fact that the coldness does actually interfere with the quick reaction necessary for keen thought. For this reason, through practice in too cold a room, or through the same conditions for teaching, efficient work is hampered.

In music this point of reaction is important. We have most of us met the accompanist who reacts so slowly that he is always just behind the soloist. It may not be much in point of time, but it is everything from an artistic point of view : the alert accompanist is one who is definitely with, and not after, the soloist : sympathy is of the essence of the business, and a slow reactor can never give that necessary feeling of sympathetic unity and support. Every conductor, too, knows those choralists and instrumentalists who are dead " on the beat " and those who are just behind, fumbling and spoiling the attack of the others. Wherever ensemble work is concerned, the point of quick reaction is one of paramount importance.

It is then the teacher's business to do all that may be done to develop a normal alertness and quickness of response in his pupil. In so doing he is making the pupil more efficient in a general, as well as in a musical way : he is imparting something to him that will serve outside the domain of music. Anything that helps us thus has an educational value in fitting us

better to live the everyday life with our fellows. This is precisely the point we are always trying to drive home, that music is a part of life, and that education in music should also be education in the art of living.

Anything that serves to give mental quickness and alertness helps also in reaction. The children's game of "Snap" is an excellent example of play with a psychological purpose, and the prize is ever to the quickest. The solving of puzzles is another way of enlisting the play faculty to do useful work, so also are games in which a child at any moment may be called upon to do something when a certain word is mentioned. Reading aloud is a good method of training reaction, and as it also involves the turning of the recognition of the written symbol into its appropriate vocal action, it possesses a double value. Mental Arithmetic is a fine quickener for the dull brain, and a sharp round of questions in class, with constant repetition of the old questions, works wonders in quickening up the general intelligence and reaction.

Again, in music, sight-reading is one of the most valuable exercises that one can have, involving as it does the testing of impression by the corresponding expression. Moreover, the added value of the sight-reading is that in covering the ground one necessarily acquires a large stock of "cognitions," which, when they are again encountered will be "recognitions": they will then be our "ready-prepared reactions," primed to go off as soon as the symbol presses the mental trigger. Therefore sight-reading should not merely be confined to the easier keys or to any particular style of composition, neither should complicated rhythm

be avoided. When the sight-reading is finished for the time, the benefit remains, for the experience has become part of the mind which is thereby the better equipped to deal with a like example again.

The playing of duets is another excellent way of improving the reaction interval and at the same time assisting the sight-reading, and something adapted to this end should have a part in every lesson. All concerted work, whether vocal or instrumental, is valuable. Discussion or debate are other methods of acquiring the ability to think and express quickly and succinctly, while a musical environment which introduces the competitive element will prove advantageous. In short, there is little musical work, unless it be the sentimental shop ballad, that does not have some bearing upon the topic we are discussing ; and whatever assists to develop the musical alertness and quickness of response is doing something very definite to make the pupil a more capable man or woman.

CHAPTER XVI

PREPARATION AND METHOD

It has been suggested in a previous chapter that lessons should be prepared as to outline and be extempore as to detail and treatment; a word as to preparation therefore may not be out of place. On the principle that the greater includes the less we deal with preparation as for a lecture—the same routine holding good for the lesson.

The first point requiring notice is the acquisition of the material, and here there is a general as well as a particular process involved. All through life, during the period of education and of post-education experience, we are acquiring the information for our work. The process never really stops. We are reading and studying, hearing music and making it; we are mixing with musicians and learning from our pupils, and it is of the fruits of this experience that we give forth. Therefore, the general process is life-long. Moreover, as we detailed in the chapter on Study, this material is being expanded, worked upon, and linked up both consciously and subconsciously in mind. Finally, there comes a time when dealing with a wealth of subject matter becomes mainly a process of selection and arrangement in order to suit the particular occasion, and there is then no specific "getting up."

In accumulating fresh material, our method of study has already been outlined. We may, however, make definite use of the subconscious powers of assimilation, by allowing the matter that has been taken into consciousness to remain for a time, perhaps a week or two, dormant in mind. The time is not wasted, for the subconscious is engaged quite definitely in absorbing and working on this material, and when we bring the matter again into consciousness we shall find that it has been sorted and classified, and that the main outlines of the subject seem to stand out of their own accord. Some of the details may appear to have been lost, but they can easily be restored by the application of the "remembering back" exercise. Very frequently, too, we are better able to criticize and assess the value of our material after the lapse of a period in this way, for sometimes the worth of a thing appears much less in cold blood than when the mood was strong upon us.

Constructive thinking should be done to a large extent on paper, for then the lines of association are definite and precise; it requires a very well organized mind to follow associations in thought without making irrelevant divergences and without losing hold of the main thread. Moreover the mind is only adapted to deal with one central theme thoroughly at one time, but the paper may hold the record of half a dozen; we strongly advocate the process of thinking on paper, but nevertheless we are fully aware of the great value of constructive extempore thought. Few, however, can accomplish it.

Supposing that the requisite material now exists in the mind, we may set in methodical fashion about

getting into shape for putting forth. The first step is one that we never tire of recommending :—" make a word list." This is an invaluable practice in a thousand directions. On paper put the point or theme to be dealt with, and then jot down the associations of this topic as they come one by one into the mind ; never mind how useless they seem or how unexpected. When one line of association seems to have exhausted itself, come back to the starting point and try another, and then another. Even an unpromising subject may thus be made to yield sufficient associations to cover several sheets of paper. Then take each primary association and work out its secondary associations. Having done this—and it will take time, but it is amply worth it—select a congenial or workable skeleton on which to hang the matter, or a selection of it, for probably it will be found that sufficient material has been amassed for half a dozen lectures.

Had we taken the subject " Song " for this expansion, we might arrange it on some strong outline, such as " Past, Present, and Future," " English and Foreign," " Amateur and Professional," " Dramatic, Sentimental, and Lyrical," or any one of a dozen schemes. But if we start by having some strong framework that follows easily and connectedly along its chosen lines, we have solved half the difficulty of memory in the delivery of the lecture, and for the listener half the difficulty of remembering it. Nothing is worse than an invertebrate, diffuse, and wandering discourse that leaves the listener wondering what it was all about.

Having chosen the scheme, the next thing is to arrange the selected matter under the headings of the

scheme, making fairly full notes. Then put this away, and make an abstract from memory of this scheme under the same main headings, with fewer notes than before ; this scheme may with advantage be made in a loose-leaf note book. Finally, the matter of the whole lecture is then transcribed *again from memory* under its headings, on to a postcard, and this postcard should accompany the lecturer to his lecture, and remain all the time in his pocket. After a little experience in lecturing, notes will be found a nuisance ; and the aim right from the beginning should be to dispense with their more-than-doubtful assistance. We make a special point of making the various abstracts *from memory* rather than from the more copious copy, for all the time we have the end of self-training in view and it is never wise to be too easy with the self. There are many things well within our grasp that we shall never do until we take ourselves firmly in hand and insist upon these things being done. The easy way leads to steady deterioration of the powers.

The final postcards are titled on the back, and then filed away for reference alphabetically in a card index, while a record of their delivery is kept separate in another card index under place-headings. For instance, turning up " Timbuctoo " in this latter, we may find that in 1903, September 5th, we delivered a lecture on " Melody " ; then turning up " Melody " in the other index we find the postcard summary of what we said, and if we need further detail we turn up the loose-leaf book with its fuller schemes. This sounds complicated, but in reality it is simplicity itself. It may not be necessary for lessons to be dealt with as exhaustively

as this, but we would suggest that the whole of the work that is to be covered in teaching should be so worked out, for then the teacher will have a very wide margin of information over and above the direct matter he is to put forward. This, besides giving confidence to the teacher, adds to the interest of the lesson, for the hopeless people are those who know no more than they have to put forward. It is rather like living up to one's income, with the ever-present worry of running into debt and always being "short," as compared with the more comfortable way of having a useful balance in reserve.

We have dealt with lecturing because, in our view, lecturing, at any rate for educational purposes, is only teaching writ large and, just as there are various recognized methods of teaching, so these may also be used to give variety to both teaching and lectures. Consideration of these methods will therefore be of value.

The first great system of reasoning and teaching is by either Induction or Deduction. The Inductive method is the study of isolated instances, the noting of the similarities and differences, and the gradual building of the law or principle which the observed instances indicate. This is the great educative principle, it leads to discovery and new knowledge; it is slow, but it is scientific and it is also natural. It teaches self-reliance, and is a good deal more trouble for the teacher than the deductive method, but its results possess very especial value.

In the Deductive method the pupil is given the rule or the principle and is then set to work out the individual instances of its application. This is really only the

method of verification and does not lead to discovery or self-reliance on the part of the pupil. It is not a natural method of instruction because it places the idea or the fact before the judgment. It is the method of instruction rather than true teaching, and it has the merit of being quicker and saving time. But the results are frequently unsound, because—as we find in arithmetic—it is quite possible for a pupil, having no real grasp or understanding of the rule, to work out any number of instances quite correctly. Then one fine day he forgets the rule and nothing is left, for there has been no real training of the mind.

In the teaching of scales the pupil's ear subconsciously recognizes a certain definite relation of sounds as being correct. It is not in the earliest stages necessary to go beyond this. If then the pupil be set to find out on the instrument, and to write down on paper, the sequence of tones and semi-tones that make the scales of, say, C, D, B flat, and G, "sound right," then from his own observation he will be able to find that the sequence is now tone-tone-semitone, tone-tone-tone-semitone; this is Induction. Then by Deduction he will be set to verify it in the case of other scales and he will find it true. He will never forget it, and even if he did he would know how to set to work again to find out. Surely this method possesses obvious advantages over the take-it-or-leave-it method of Deduction: though this is not to say that deduction has not very valid uses.

The analytic and synthetic method next demands a word. This is simply the most natural process in the world and the one that the child adopts with his toys. He breaks them to pieces to see how they work. Un-

fortunately the youngster is generally unable to complete the process and put things together again. We adopted this method in dealing with the mind: we analysed its functions and, as it were, took it to pieces, and then having discovered how to make each individual function work better, we put it together again. The same should be done with the work; break a difficulty up into its component parts, deal with them separately, and presently the whole difficulty is dissolved. Analysis of a piece of music will do exactly with the music what we have done with the mind. As an example of how the working of mind is that of one component and coherent whole, we may point out that this analysis and synthesis is now very like what we referred to in "memory and meaning" (p. 67).

The "Heuristic" method is the "find out for yourself" method. It is not so popular to-day as in the past, but the present tendency is in the rather doubtful direction of removing most of the difficulties from the pupil's path and leaving him little to find out. It is questionable whether we are not overdoing this and making things too easy. Invalids are fed on pre-digested food, and probably if we fed a healthy individual for any length of time on this type of food we would turn him into an invalid: we might suggest that the same applies to mental work. Schoolboys to-day would faint at what those of fifty years ago had to do. By all means remove gratuitous difficulties, but let us not accept as a final excuse for not knowing, the whine of "But you never told me!"

Another method is known as the "Direct"—the simple "telling." It has its purpose and its value,

but it should perhaps be more sparingly used than most as it is apt to develop into a "take-it-and-don't-argue" style which is not exactly the last word in education. Its value, of course, will vary tremendously with the person who applies it, as indeed will all methods, but it is at once the easiest and occasionally the most barren of result.

The "Dialectic" method is the conversational method—certainly to be avoided in class by the bad disciplinarian. If managed with discretion it is extremely valuable, and it leads the individual pupils to formulate their difficulties and express their views. If this method be adopted in class it is well to keep to the rules of public meeting and insist that all questions and discussion shall be addressed to the chair—the teacher being the Chairman—with the rigid rule that the speaker shall rise to his feet and that only one person shall be on his feet at a given time. The ruling of the Chairman must also be accepted as final. There is no reason why even children should not thus become accustomed to the rules of regular procedure which have been found by long experience to be necessary wherever two or three are gathered together.

The "Socratic" method has been so named from the habit of Socrates of putting questions. There is no way to equal it for the testing of knowledge, and if the teacher be humble enough to test his own knowledge by asking himself why this? and why that? he will very quickly be convinced of the vastness of his own ignorance. It is so easy in teaching to take too much for granted both in the case of oneself and in the case of pupils, and it is never a safe process. Test by ques-

tions habitually to ensure that the knowledge is being assimilated and that the pupil is understanding upon the same lines as the teacher and not on parallel straight lines that will never meet however far they are produced.

With a knowledge of these various methods the teacher will be able to vary the form of his instruction and to avoid monotony by changing from one to the other. Interest is always aroused by things that keep moving, and it should be the endeavour of the teacher to keep his subject moving by the presentation of different aspects, and by the manner in which the instruction is put forth.

CHAPTER XVII

CHARACTER READING

THE wise teacher is a good judge of character—or ought to be—for the ability to handle people tactfully largely depends upon an appreciation of their main characteristics. It is quite impossible to treat all alike, for what will suit one will offend another : some pupils are to be encouraged and others restrained, and unless the right treatment is accorded to each the best results cannot be expected. Probably in every person there is a kind of subconscious element of character-analysis which saves him from making glaring mistakes, but the ability to gauge the differing types of temperaments and their corresponding methods of treatment can quite easily be developed, and with advantage.

There is always a consonance between externals and the character within. Everything without stands for something within, the outward and visible sign indicating the inward and spiritual grace, or disgrace, as the case may be. Even at the first casual glance at a person we can deduce a number of indications as to the general disposition. The bearing will at once show whether confidence or diffidence predominates, whether strong vitality or weak is mostly in evidence, and whether the temperament is chiefly inclined to the nervous or the lethargic type. The walk and the

method of approach and then the handshake will give more information as to the type of person we are meeting; the strength or weakness of the grip, the sentimental clinging or the abrupt dismissal, the affected flourish or the graceful simplicity, all these tell their tale to the ready observer. The manner in which the first meeting and greeting is carried through is also indicative of much in the character; so that, before ever a word is uttered in converse, we can deduce much information as to the character with which we have to deal.

The general build of the individual will tell us more if we are wide enough awake to observe. Other things being equal (and they very rarely are equal) a big-built person is more able than a little one, there is a certain largeness and breadth about his mental build as about his physical conformation. But the big frame requires great nervous energy to keep it going, and if there should be any deficiency of vitality then the big person is at a grave disadvantage as compared with the smaller. But provided that both the health and the energy be robust the larger man has the pull. More important, however, than mere size is the general proportion or balance. A broad chest bespeaks plenty of lung capacity, and therefore vitality and general health: the narrow chest and the undeveloped indicate the opposite, which must inevitably be registered in the same lack of intellectual energy. With large lung capacity and all that it implies are generally found the wide nostrils of the deep breather; pinched nostrils are generally indicative of deficient vitality and weakness; and all these things have a very direct bearing

upon the results that can be obtained in teaching, and on the expectations that can legitimately be indulged.

A finely and delicately built face is generally associated with a corresponding fineness and delicacy of the mental characteristics, while a coarse-built person has certainly something to correspond in the mental way. Rugged features betoken a like ruggedness of disposition, strong features naturally go with strength of character, while with the ordinary and commonplace features we need expect no outstanding departures from the normal in other directions. On the other hand, with departures from the normal in face, feature, or figure we may look with some assurance for a like deviation in the mental realm. Dr. Haydn Brown ("The Secret of Human Power," p. 61) says "As a rule asymmetry, anatomical and physiological, is co-existent with some sort of mental irregularity, however small this may be." The experienced teacher and observer will confirm this.

From these general indications we may proceed to other variations. Coloration for instance is not without significance. How often do we see a florid soprano, with a light voice, possessing dark hair and features? How often do we find a deep contralto with a fair complexion? Incidentally where are our short contralti and our tall soprani? Where is the lengthy tenor with dark complexion, and the light, sandy-coloured, short deep basso? In spite of occasional exceptions it will be found that we do not meet with these types associated, but that on the contrary high voices and light are found with short and fair people, and low deep voices with tall, dark folk. Then obviously if we find

that this is Nature's general rule we shall modify our expectations of our pupils accordingly. The dark colouring also indicates a certain slowness of intake and perception, coupled with a good degree of retentiveness ; the lighter colouring standing for a greater mental agility but less marked ability to retain. Consequently again we shape our expectations of our pupils conformably. We have heard one of the foremost examiners of the day state that he always ascertained from which part of the world the candidate had come, and he then knew what to expect ; he did not make the mistake of expecting the same from all alike. There is, perhaps, more in this question of colouring than one might at first suspect ; but there is naturally a greater degree of energy and liveliness to be expected from the white races who inhabit the colder portions of the globe, than from dark races whose energy is, to put it politely, somewhat restrained by the heat of the tropical or semi-tropical regions. Where, as in our own country, the colours are mixed, we still find something corresponding in a way to this geographical variation of characteristics.

The face, of course, has long been recognized as an index to the character, and there are three main types easily to be distinguished, though any individual face will probably be a compound of the types, since pure types, like the " average " man, are not to be found. The first type, known as the Mental, is triangular in shape, with the apex of the triangle at the chin. This type is predominantly the brain type, found in teachers, professors, writers, and the learned professions generally. The brain power is strong, but the physical

health generally leaves something to be desired: these people are prone to let their mental energy overtax their strength, and they pay the price accordingly! Such are most readily approached by logic and argument. Pupils of this type have to be restrained from overdoing things, and their physical limitations must ever be kept in mind by the teacher.

The second type is represented graphically by the circle, and this round type of face denotes more physical strength in its possessor. It is, perhaps, a more emotional type, swayed more by reference to the feelings than the brain, and sometimes (be it whispered) even more readily by the appetite. People of this type will not be likely to overpress themselves, and as pupils will very likely need to be encouraged and stimulated in their work.

The third type is represented by the oblong or the square, and here there is the good brain development and the strong physical health. These are the essentially "constructive" people—good at engineering and design, good at fugues and academic counterpoint, but needing to be encouraged and inspired, and even fired with the beauty of poetry and the poetry of beauty. The teacher's task is to estimate the varying proportions of these types, and to plan his treatment and tuition accordingly. If he fails to do this he will certainly find occasions when he does the wrong thing.

Something can be judged from the general profile of the face. The two contrasted types are the projecting and the retreating, and the characters have the same consonance in penetration and "push," as compared with the absence of drive of the non-assertive and self-

depreciative. As a matter of fact the former type may actually go further with a small brain capacity than will the latter with greater gifts. The teacher will again restrain the pushful and encourage the less forceful pupil.

The balance of the features and their individual characteristics will afford further information. The high forehead indicates a greater cerebral development than is the case with the sloping forehead, and we expect, and generally find, a greater degree of intelligence. The narrow head (rabbits have narrow heads) indicates less strength and courage than the wide. The puckered forehead denotes either worry or concentration. Large eyes are generally associated with special sensitiveness, and these pupils must be carefully and tactfully dealt with. Eyes that never meet one with a direct or straight gaze fail to inspire confidence.

The nose, both as to size and shape, tells a story; the larger organ—other things being equal—standing for greater power. The shape will vary from the extreme Roman with all its Napoleonic characteristics, to the straight with its direct, penetrative and incisive qualities, and thence to the upturned with its sad lack of authority and conviction. The teacher may dominate the last type and say what is to be done, but he would be very ill-advised to treat the first type in the same way; here he must tactfully guide and suggest. Pupils with narrow nostrils and adenoid tendencies must be made to do breathing exercises; operations for the removal of adenoid tissue and tonsils can very frequently be avoided by such means, and for further information upon this very important topic we may

refer the reader to a pamphlet on "Adenoids" by Kynaston, published by the St. Catherine Press, Stamford Street, S.E.1, at 1s. Pupils with adenoids are unnecessarily handicapped and can do neither themselves nor their teachers justice, and it is because—or partly because—breathing exercises act as a preventive of adenoid trouble that we suggest that the teacher should always encourage their use.

Teeth again give an indication of the general health, and regular and well-formed teeth denote a regularity of disposition. But bad teeth are certain to be allied with inferior health, and probably also with indigestion and malnutrition; and can the teacher afford to disregard these conditions and at the same time expect to get results? The curves of the mouth show humour, optimism, or pessimism, and they may also indicate strength or cruelty; observation and comparison will soon teach us which. The chin in its normality, excess, or deficiency, will give us a line to the general determination and grip; determination carried to excess is obstinacy. We do not attempt to drive an obstinate pupil; we use suggestion and lead him, though perhaps he may not realize it. A weak-chinned and weak-willed pupil is encouraged to more determination and greater tenacity of purpose.

Knowledge of what is shown by the types of fingers and hands is also of practical value. These types range from the conic, pointed-finger, highly emotional type, through the artistic, philosophic, square, spatulate and rather blunt fingers, to the rudimentary animal-like type, and the mixed hands which may be made up of various types. The emotional must be stabilized,

the artistic welcomed, the philosophic stirred to action, the square inspired, the spatulate helped to greater sensitiveness of beauty, the rudimentary avoided, and the mixed judged on its merits and proportions. It can hardly be denied that knowledge of this kind is specifically of use to the teacher and many manuals on the shape of the hands and fingers contain valuable information. As it has been said, in teaching John Music, it is not only necessary to know Music, but it is even more important to know John.

We do not consider that we have gathered all that we may about a pupil until we have seen his handwriting, for this again is one of the externals that indicate character. If the capitals are unduly large and full of flourish, we have to deal with an egotist, and humility is a first condition of learning. If the writing is well-formed, well-balanced and set out, we have to do with a balanced character. Stops and details carefully wrought show the capacity for taking pains. Angles in writing mean angles in behaviour; pointed script tells us that we have a pointed individual to consider. Curves stand for affection and a round disposition. Hurry shows in the writing, so also does cruelty and vindictiveness—these latter in the blunt stabbing finals of the letters. Originality and artistry are obvious at a glance, and strength and weakness write themselves large on every page. We have occasionally had great surprises at first sight of particular handwritings, but in every case further experience of the individual writers has shown us that the handwriting has been telling the true character more clearly than any other visible sign.

Finally we suggest that this matter should not be carried too far, and it must be realized that the judgment must always determine how much influence must be attached to each individual indication. There may be contrary indications to be weighed up, and there may be temporary conditions to be distinguished from permanent. But we have purposely kept the whole matter on broad lines which are in strict conformity with observation and common sense. In this way the teacher's natural quickness at summing up pupils' characteristics may be very greatly augmented, and with these additional helps it certainly ought to be possible to secure a higher degree of tactful handling and a much smaller proportion of mistakes.

CHAPTER XVIII

IMITATION AND ORIGINALITY

IMITATION is seen at a very early period in the infant's life. The child sees Mother smile and smiles faintly in return, and this is perhaps one of the first intimations of its dawning intellect. The enquiring mind of the teacher will naturally want to know why the child smiles ; to dub it the faculty of imitation is no explanation at all. Psychology, however, tells us that every idea is a " motor " idea, that is to say it tends to pass into action or expression in the absence of anything to prevent it doing so. Therefore, when Mother smiles she implants the picture or idea of smiling in the child-mind, it forthwith passes into action and the child duly smiles. This is the " why " of the process. In this case the idea is an external stimulus provided by Mother, and it is not until educational progress has gone a good deal farther that the child originates the stimulus within and generates the desire to smile from its own consciousness. Savages and the lower human types which are still in the stage of racial childhood display this same facility in imitation.

Nature is our teacher and our taskmistress, and to all that we do she attaches after-effects, either of pleasure or of pain. By these results she teaches us what to do and

what to avoid. Ideas tend to pass into action unless prevented, but those things which Nature teaches us not to do are restrained or prevented from passing into action by stronger ideas, known as inhibitions. Thus, gradually, by the way in which we are acted upon by consequences in our environment, we learn to do certain things and to avoid others. Education, custom, convention, and social obligations carry this process a good deal further, and thus in a normal way we develop our self-restraint and self-control.

Since the child is learning from the consequences of his own actions in this perfectly understandable manner, it is the height of folly for two parents to disagree between themselves as to the way in which the child should be allowed to behave. If he does a certain thing and father laughs and mother becomes angry, how is the child to learn anything from such inconsistent results following upon the same action? Or if mother kisses him for acting in a certain way upon one occasion and smacks for the same behaviour upon another, what is the poor child to understand, and how can his mental education be carried on under such erratic conditions? In point of fact the child, having more sense, will quickly decide to disregard altogether such inconsistent parents.

Upon the teacher there rests a like responsibility to provide consistent reactions to what the pupil may do, and thus to enable him to learn right from wrong. In fairness to the pupil, then, no teacher should allow himself to become the victim of moods; for in one mood he may pass a thing that in another he would reject, and such inconsistency can only disturb and

confuse the pupil and greatly impair the value of the teaching. Herein also lies the importance of all early models in the teaching of children, so quickly do they pick up the things that they see and hear. We know that the child will very often begin to sing in just that style in which the nurse has been accustomed to sing to him, and with the same mannerisms, and bad habits are acquired just as readily as good. Imitation is at work fashioning itself, as it needs must, upon the models that have come under notice ; thus the importance of great care upon the part of the teacher is readily realized. Those things alone which are worthy of imitation should be handed on.

It should be noted that inhibitions do not wipe out the original ideas which they restrain, they simply prevent their passing into action. If, therefore, a bad model be first introduced, although later teaching may provide a better, the earlier model still remains and may easily betray itself upon some occasion when it is least welcome. The last to come is the first to go.

Imitation is thus clearly an essential stage in, and the necessary beginning of, all teaching ; and the mind can only grow from its mental food supplied from outside. Mental pictures must obviously be derived in the first place from experience, afterwards they can be dealt with and worked up anew within, but there is no way of dispensing in the early days with the need for imitation. It is, however, a stage that must be outgrown. Where the teaching is founded simply and solely on this basis of imitation, it is very sadly lacking in value. We do occasionally come across teachers whose pupils will one and all sing in exactly the same style and with the same

mannerisms, and we also meet others whose students all play exactly to pattern. We venture to say that such teaching misses the mark, for the pupils, instead of proceeding from imitation to originality, have been content to be turned into duplicates or replicas of the same original, and so have forfeited their own individuality. It has been well said of such teaching that "imitation is suicide." Having only one life to live, we cannot possibly afford to devote that life to making ourselves a pale shadow and reflection of some other individual, however excellent.

There comes a time when the student awakes to the realization that he can and should deal in original fashion with the material with which imitation has supplied him; this is as it were the fusion point of his educational substance. It means that the individual grows up and attains his mental majority; like St. Paul, he "puts away childish things and becomes a man." There is self-discovery in this realization that the mind is well stocked with material, and that we have now to see what we can make of it. In many lives this moment of growing up is quite a definite experience, but until it comes the individual, whatever his age, is still in a state of intellectual childhood.

By way of analogy we may compare the laborious process of learning to write. First there come the lines, pothooks, and the letters; then the one-syllable words, and after that the copies innumerable. Then there arrive the first efforts at dictation, and so on until the stage of actual composition is reached. All up to this point is more or less a matter of imitation. Then there dawns the day when the individual begins to

express his own thoughts in the technique of writing which he has so laboriously acquired ; and all this long process has been leading up to, and culminates in, the stage where he can put forth his originality.

The high gods grant especially to the young this gift of originality, but the business of life all too quickly robs them of their birthright, and it should be the task and privilege of the teacher to foster and cherish this gift in his pupils. When we have once done a thing in a certain way there is left in the brain an impression which renders it more easy to do it again in the same way on another occasion, and still more so on the third. In a very little while that action develops into a habit, and our originality in that direction forthwith vanishes. Unless something occurs to shake us out of the groove of habit we shall continue to engrave it deeper and deeper, until at length it is almost impossible for the thoughts to run in any other direction. Thus habit and the association of ideas are always at work to kill our originality. Convention binds us and tends to stifle individuality ; rules and regulations limit and confine us. The lot of the pioneer who forges his own new track is frequently very hard, and disillusion lies only too often at the end of his rough pathway ; when we realize how much easier it is to do the accustomed thing our waning strength gradually puts an end to our early dreams and our unique visions. Yet with it all, so soon as we cease to see visions and dream dreams we cease to be original and we relinquish all claim to genuine progress, accepting in effect a verdict of " extinction by stagnation."

In musical work we note this same tendency at its

task of limiting and circumscribing. We are told that certain things are correct, so we must do them; there are traditional renderings of standard compositions which we neglect at our peril. A prescribed round of works—chosen by whom, nobody can tell—must be studied; and yet another set is to be performed in the orthodox manner in the usual place. Pages and pages of figured bass exercises must be written before the budding composer may pen his thoughts, and when the exercises have been accomplished the thoughts have probably fled elsewhere. Strict counter point* and formal harmonies must dig their grooves deep in our minds by way of ensuring the continuity of the species—a sort of musical germ-plasm, as it were—but where in all this does the saving grace of originality come? The point is ever this same problem of imitation which must be outgrown in order to reach originality, and the forces of reaction are ever at work to prevent that originality coming into being. All these earlier things may be valuable in themselves, but their greatest value is in acting as stepping-stones to higher things; in themselves they have no true fruition, being merely the means to an end. We must strive to use them,

* "Twenty three years ago . . . the trail of the organ loft was over even University examinations for musical degrees. Aspirants were still required to show proficiency in a species of musical arithmetic called 'strict counterpoint'—a science which could be acquired with equal facility by any intelligent plumber and gas-fitter. Once acquired, nothing could stop your becoming a Doctor of Music, an object of awe in your parish church, and a subject for mild derision in operatic and orchestral circles." —Sir Richard Terry, Mus. Doc., in the *Evening News*.

while at the same time refusing to be used by them ; they must be our servants and not our masters.

We should learn to play things or to express them in song as we feel them and not as other people tell us we OUGHT to feel them ; for since we are all built differently there is simply no "ought" about it. Our own feelings, aspirations, and strivings must go into our music, and as those aspirations and desires, and even sufferings, are determined solely by our own peculiar circumstances, it simply betokens a lack of sincerity if we try to express those of someone else instead of our own. It is the individual accent and stress that we give to our words and phrases that mark the individuality of our rendering ; we may do exactly what someone else does and imitate them, as we say, to the life, but at the very best this can only be a good imitation and not the true thing.

Expression is life and growth. For everything that we express is added by the power of memory to the fabric of the self. If, then, the music makes its appeal of truth and beauty to us and we express the same, reinforcing it by our own vitality, in practice and performance, we add this finer element to our mental growth. By the expression of mere imitation we grow shallow and superficial, yet by the expression of genuine musical feeling, the groping after truth and beauty, we grow along this better way of self-expression to a greater height of progress and usefulness.

In expressing truth and beauty we are not giving forth anything that is truly of our own creation, we are but handing on that which has been vouchsafed to us. Like the fountain that derives its power from

a higher source, so too do we derive whatever spiritual expression we may accomplish from a source that is greater and higher than ourselves. But whatever we express let it at least be genuine and sincere. If we are at the stage when we can appreciate nothing but ragtime, let us at any rate be honest about it; we need not worry, for presently the ragtime will tire us and drive us from very boredom to something better. Whereas if we pose as appreciating something that is truly beyond our capacity, we may hold to the lie indefinitely and so stultify all progress. The expression of truth, sincerity, and of genuine feeling, even though it be on a humble level, ever makes for growth and advancement. Its effect is to assist our evolution, working through the threefold stages of Imitation, Originality, and Expression.

CHAPTER XIX

PHYSIOLOGY

THE teacher should be aware of the rudiments of physiology so that he may know something of what is happening in the body in consonance with what is going on in mind. The nervous system is the link between spirit and body. Spirit itself is far too tenuous to be able to act direct upon the comparatively gross matter of the body, therefore the nervous system connects at the upper end with the more spiritual element through the delicate machinery of the brain, and at the lower end is linked up with the body through muscle. This nervous system is of extraordinary complexity in man, and as we trace backward down the scale of evolution we find a gradual simplification of nervous structure, verging to the more and more rudimentary, and in the case of plants none at all. Considering it the reverse way we see that the manifestation of life has increased concurrently with the growth of the complexity of nervous structure. It may at any rate be suggested that spirit, involved in matter, has supplied the requisite "drive" for the evolutionary process by demanding ever more and more development of structure to give that spirit greater powers of expression. The growth of our own structure in brain and muscle may be observed to follow this same plan in proportion as we ourselves demand from these better and greater means of expression.

The nervous system has been aptly likened to a telephone installation. The nerve endings are represented by call-boxes; and these are specialized to receive the messages from the outside world which come in the form of vibrations or impacts. Each of these endings represents some modification of the sense of touch; smell, for example, has been termed "touch at a distance." The ear is a piano, and in the innermost ear the fibres of Corti respond like the strings of that instrument to the vibrations transmitted from without. There are some eleven thousand strings to our ear-piano and "music employs only about ninety of the eleven thousand tones that we can distinguish" (Titchener). The eye is a camera with lens, iris diaphragm, and sensitive plate (the retina) all complete. Like the camera, the retina receives the impressions of things upside down, but the brain translates them right way up once more. Chemical action is set up in the retina, as in the sensitized plate, by the action of the ether waves of light, and as a result a nervous impulse is transmitted to the brain. In the case of the other senses a somewhat similar process is at work.

These nervous impulses are transmitted along the nerves as an electric current passes along a wire. There are two sets of nerves, one set carrying the incoming messages and termed the afferent nerves, and the other set carrying the outgoing impulses and called the efferent. These nerves themselves, like the electric wire, consist of an inner core, and an outer insulating cover which prevents the impulse leaking, or spreading and getting lost. From the areas of specialized sense endings, which we have termed the call-boxes, the

message passes along the nerve to a receiving centre, corresponding to the exchange in the telephone system. There are various centres and exchanges each concerned with the receipt of a particular type of message. It does not in the least follow that we are aware of all these messages, and in point of fact such a thing would not be possible for they are coming by dozens every minute of the day. The bulk of them are dealt with by what we might term automatic exchanges, or by heads of departments who are responsible for the correct performance of their own particular duties. But where a head of a department finds himself in difficulty he refers the matter to the general manager, who in this case is represented by the self. When this occurs, we become conscious of a process which would ordinarily be carried on subconsciously and without our knowledge.

The efferent nerves start out from what is called a motor area where movements are planned and directed, and end by working into a muscle with a sort of interpenetrating fibrous termination. When a nerve impulse is sent to the muscle it contracts, and in its shortening it gives rise to a definite pull. Our bodily movements are effected and controlled by the action of opposing pairs of muscles ; in the arm, for instance, there are the flexor muscles to bend the arm and the extensors to straighten it. When one pulls and the other relaxes the arm moves or bends accordingly, and some of the difficulties of pianoforte technique quite definitely arise from incomplete relaxation.

There are two nervous systems, the sympathetic and the cerebro-spinal ; the former is the name given to a

series of ganglia, or departmental "little brains," lying on each side of the front of the spinal column, and also in the chest cavity. These, with their appropriate nerves, carry on all the workings of the vegetative functions of the body. The cerebro-spinal nervous system consists of the brain proper and the spinal column, and is responsible for all the conscious working and all those operations conveniently grouped together as intelligent. These two systems are practically independent in working, but nevertheless are most intimately connected. We are unaware of the workings of the sympathetic system, and over it we possess no direct conscious control; it does not, however, generate its own steam, but rather serves as a distributing agent of the impulses it receives from the central nervous system (cerebro-spinal).

Blushing is an example of the work of the sympathetic system, and when once the impulse is under way all the efforts we may make to control it only render the trouble worse. But by the gradual building up of control, through suggestions made by the self in the central system, even the sympathetic may at length be brought under orders. It may take time, but it can be done. This sympathetic system looks after the thousand and one processes in the body which are out of conscious control. "Little groups of cells (ganglia) are looking after the blood vessels. Little groups of them are engaged in watching the breathing. Little groups of them are engaged in balancing and performing other complex co-ordinating movements." (MacFie, "Romance of the Human Body.") Thus those functions which we have previously referred to as

subconscious are largely within the domain of this sympathetic system.

The brain itself consists of three main parts: the medulla or spinal bulb, the cerebellum or little brain, and the cerebrum. The spinal bulb is the seat of the nervous impulses controlling respiration, the heart-beat, the act of swallowing, the secretion of saliva, and other processes. The cerebellum looks after the process of co-ordinating all the various movements and functions of the body. In the case of an intoxicated person we see the action of this function impaired by the poison of the alcohol, and in consequence there is a very visible lack of co-ordination between the legs and arms, a disturbance of the sense of balance, and a general upset of the normal working. In musical performance this co-ordination of varied movements is carried to a pitch of extraordinary complexity.

The cerebrum is the seat of the perceptions, the intelligence, and of the will—speaking physiologically. The other parts of the body may be able to carry on the complicated business of mere living, but for active thought and the initiation of voluntary movements we have to call upon the services of the cerebrum. If we could have the parts removed that cover the right and left sides of the brain proper—the cerebral hemispheres—we should see the cortex of the brain, the cortex meaning the "rind." It would be seen to consist of a large number of convolutions, looking like the grey surface of a rather small inner tube of a bicycle tyre folded up in all sorts of queer ways. The higher we go in the scale of life the more complex these convolutions are found to be, and there is reason to believe that they

increase in complexity with our mental growth and development. This suggests that the brain is ready to accommodate itself to our demands upon it. Memory impressions are in some way stored in the grey matter on the outer side of this cortex; but no one pretends to know in what manner. On the under side of the cortex is white matter, consisting mainly of white fibres which pass inwards from the grey matter of the surface. Thus in the grey we have the various records of memory, and in the white matter the fibres that link them up the one with the other, and the whole into one common network. It is curious to note that the nerves from the right hemisphere of the brain pass over rather suddenly to the left side of the body in passing through the spinal bulb. Consequently, the right side of the brain controls the left side of the body, and *vice versa.*

We may now see how extraordinarily complicated are the bodily processes that go on while we are accomplishing even the simplest performance in music. Observe what happens when we go to play a common chord from the printed note: —we "see" the chord on the sheet of music paper, and this means that the ether waves carrying their message of vibration pass through the lens of the eye and impinge upon the retina. Here they set up chemical action which transmits a nervous impulse along the optic nerve to the centre for sight in the brain, and, in some wonderful way which nobody even pretends to understand, the message is referred to consciousness. So we say to ourselves:— "Ah, yes! Chord of C major" and we give orders for arms, hands, and fingers to make the appropriate movements, and for this and that to be done. These orders

are sent first to a motor centre in the brain, and thence, through the efferent nerves, stimulations are sent to the muscles concerned. The muscles contract and their neighbours relax, the arm moves, each individual finger obeys the orders from headquarters, and then the chord is played. But the whole round is not yet finished, for the ear now receives the vibrations of the chord that has been sounded, its stimulus passes along the auditory nerve to the brain, and there it is translated and recognized as the sound of the chord. This sound is then linked up and associated with the muscular movements, and the whole wonderful process is complete.

After we have played this chord several times from the music, we cease to trouble consciousness for any further directions, so we link up the receiving centre direct with the motor centre, and cut out all reference to consciousness. This means that henceforth we shall be able to play that chord subconsciously and "without thinking," we have made a short-circuit arc in the brain which relieves us of a tremendous amount of work by making the movements automatic. We have now a ready-prepared association, ready to be carried through as soon as it is initiated by the proper sign on the page of music. Multiply this simplest of examples by perhaps many millions and it will be seen what a wonderful wealth of resource must be at the command of the skilled musician. In sight-reading, accompaniment, extemporization, in composition, as well as in the muscular side of technique, the musician is every day relying upon this wonderful working of the mind, and is developing it to a degree of efficiency that is little short of miraculous.

CHAPTER XX

POINTS ON PRACTISING

PRACTISING has two objects. In a general way the purpose is to secure a perfect performance, but there must be the more immediate object of engraving a perfect record in the brain. The performance is merely the reproduction of the record, just as in the gramophone, and no power on earth can ever make the performance better than the record. Those who are familiar with the process of recording for the gramophone will know what extraordinary care must be taken, and to what endless trouble all those concerned will go. They realize the extreme importance to be attached to the perfect engraving, as the person who engraves on his own brain by practice frequently does not.

Any imperfection in the brain record must come out in performance, for neither arms, hands, nor fingers move themselves. Their motion is the muscular response resulting from a nerve stimulus which is supplied according to the pattern in the brain. Imperfections, therefore, must ultimately be referred to the brain. Here are the mistakes, the blurs, the gaps in memory, and all those discordant elements which go to mar a performance. All this serves to emphasize the importance of taking supreme care during practice over the engraving of the record in the brain.

This necessity for care demands concentration, and the attention must be directed solely to the matter in hand. We cannot afford to allow the attention to be distracted, to wander, or to become diffused, for all these simply invite imperfection in the record. It is also necessary that the practice, especially in the early stages, should be slow, in order to be perfectly accurate. To sacrifice accuracy for speed is one of the greatest mistakes that can be made. Every slip or mistake that we make owing to our endeavour to go too fast is engraved permanently, and can never be completely erased. We may put it right on the next occasion, but the net result is then that we have done it once right and once wrong. The two cancel each other out, and we have actually done nothing at all except to confuse the issue so that we can probably never get a perfectly clear pattern.

In this light it is a great fallacy just to " hum things through," or play them through " something like " on the first occasion. This, indeed, is the most important occasion of all and the one which we should endeavour at all costs to make as accurate and perfect as possible. There is a little proverb which says :—" First to come, last to go," and it finds its analogy in all psychological work. If the mistake comes first and the correction follows after, the correction, being last, is the first to vanish ; then we are left with the original mistake. Notice how, when having made a mistake and having subsequently rectified it, we, to our chagrin at our performance, make that original mistake again, in spite of our best will and intention. The flurry or the nervousness, the fatigue or the ill-health, have taken

away the later correction and left the earlier mistake. We cannot too strongly urge that the first making of the pattern should be done, not carelessly, but with scrupulous accuracy and regard.

Regularity of practice is a condition of the best work. There is a rhythm of conscious taking in and subconscious assimilation, just as there is a rhythm between eating and digestion. When this rhythmic regularity is kept, the best results are secured; but where it is disturbed there comes a falling off in the progress. An hour a day regularly is far better than two or three hours at a stretch with irregular intervals between. All nature works in a rhythm without strain or fuss, but whenever rhythm is destroyed by irregularity the efficiency of the working is surely disturbed.

Attention should also be paid to the mood in which we practise. The " don't care " or slipshod attitude is fatal, nor are we likely to secure results of beauty if we are in a bad temper or depressed. All art work demands a certain sympathy, and where the emotions are tuned to a harsh or undesirable note that sympathy will be conspicuous by its absence. Even the room in which we practise will have its atmosphere and its own particular effect upon us. The best work is done in our own accustomed room, where we have generated our own " conditions." But for a sensitive musician to have to do his practice on an unsympathetic instrument in a room full of glaring examples of inartistic taste, is to ask him to do his work under conditions that render good work impossible. The temperature of the studio or room should also be at a comfortable level; if it be too cold, or too hot, again the work suffers.

Practice during fatigue is valueless or even worse, for the inaccuracy or inefficiency of the sense messages, both incoming and outgoing, render good results more than doubtful.

Practice may be of two kinds, mechanical or mental. In the former case the impression recorded in the brain comes from the outside, through the ears and the various muscular actions and adjustments. In mental practice the stimulus is generated from within. A spot of lemon juice placed upon the tongue will immediately produce a flow of saliva ; but the imagination can be made to picture that spot of lemon juice, and the same flow will be started. In other words, the stimulus from without and that from within alike produce the same type of result. This point is most important, for it means that we can engrave the record in our brain (and this, be it remembered, is the immediate object of practice) by our imagination, as also by our technical practice. The facility and definition with which this can be done will, of course, vary tremendously with the individual. Those people who have strong imagination and well-developed visual powers will naturally be able to secure greater results than those who are poor visualizers. Technical practice tends to dull the brain, but mental practice on the contrary calls for a development and increase in the mental powers.

The advantages of mental practice are many and various, though we do not suggest that it can entirely take the place of technical work. There is, first of all, a saving of time, for mental work can be carried on at odd moments when access to an instrument is not possible ; and, in addition, the mind working in thought

can travel faster and cover more ground than is possible in the normal way. Secondly, it is a great labour saver, and reduces wear and tear to a minimum. It also saves the instrument and spares the neighbours' nerves. Thirdly, when we are working in thought we need picture no mistakes. Our fingers may make errors, which are recorded by memory, but there is no reason why the mind should picture anything but a perfect performance.

If we set the imagination to work, we can picture our technique finer and more fluent than we have found it, and if we practise this higher standard of technique mentally until it acquires dominance in the mind, we shall find that when we go to the instrument some of the imaginative technique has become a reality. We would suggest that at first a small portion of the time hitherto given to mechanical practice should be allotted to mental work and the result carefully noted. As the success becomes more marked, more time may be given to mental practice, and less to the mechanical part. Discretion must finally decide the proportion of time that may best be allotted to each kind. In mental work, sit comfortably in a chair with the minimum of outside distraction (*e.g.*, in a quiet room with the light dimmed). Then depict in as vivid, definite, and clear a manner as possible, all the mental and muscular actions that would be carried through in actual performance, though no motion is actually made.

The experimenter will come upon many other points ; for example, in cases of stress and emergency the mind seems to have the power of seeing many things simultaneously rather than in sequence. At any rate, if

they do follow one another, the mental pictures move with such rapidity that they might be correctly described as " flashing " in the mind. It may be suggested that just as a musician grasps a whole sequence simultaneously, so with the development of this power of mental working it may be possible to review and rehearse in a simultaneous picture a whole passage, or even a movement that might take two, or three, or more minutes in performance.

On the emotional side, imagination can obviously take us to heights we do not ordinarily scale. Such limits as there are to mental working arise from the senses and from the general restrictions of thought and behaviour that hedge us round. These, in the imagination, can be transcended, and the emotional message can be enhanced, and shades of delicacy introduced to make a rendering certainly finer than our usual. These patterns, we suggest, can be engraved and engraved again until they become as paths in which the thoughts will run, and thus they will enable us to reproduce some degree of the emotional achievement we have been rehearsing.

If we take the concrete point of flexibility, whether in finger or in voice, and make reference to a passage which we have found difficult, we may try the experiment of dropping all muscular work and resorting to mental. We rehearse the passage through vividly, half a dozen or more times, picturing the desired flexibility and ease that we would possess, making sure that the picture is very real and as clear as we can possibly make it. Then keeping that picture of freedom quite definite in the mind's eye we try the passage through

on the instrument or the voice. The half a dozen mental reproductions will probably have made the passage distinctly easier, and though such an experiment is but the simplest of beginnings yet it will serve to inspire us with confidence by the demonstration that there are at any rate possibilities in the method.

Mental practice will also enable examination pieces or other items to be kept up to concert pitch in a technical way without any danger of their growing "stale." Staleness comes from the over-repeated sense impressions, to which the mind gradually ceases to respond with the original vigour and interest. Any external stimulus ceases after a time to produce the same effect and reaction; but mental work, since the stimulus comes not from without but from within, can always be kept fresh, full of vigour and interest, right up to the moment of performance. The technique generally can be kept up to standard also in this way. In fact the whole question of mental working is merely in the experimental stage, and, with the vast resources of the subconscious mind as yet unexplored, it is quite impossible to set limits as to what may or may not be done. But it is certain that here is a vast and very profitable field for research and exploration, and it is possible to say that, so far as experiments have been carried at present, the results are astonishing and exceedingly full of promise.

CHAPTER XXI

ATTENTION AND INTEREST

It is rather difficult to give a concise definition of attention, although we know well enough what is meant. It may be likened to a state of concentrated or focussed consciousness as opposed to the diffused, or, again, it may be considered as the definite direction of mind towards an object. There are three kinds of attention, and the first, which we may just mention in passing, is spontaneous attention. We attend spontaneously to claps of thunder and sudden noises because we cannot help it; but in this type lies no educational interest.

Apart from spontaneous attention there are two kinds, known as voluntary and non-voluntary; the first involves the use of the Will, and the other does not. Non-voluntary attention is a matter of the feelings, and is aroused from interest in the subject. Will-attention is active, and Interest-attention is passive; in the former case the stimulus that leads to the attention is from within, by an effort of Will, and in the latter it is from without, because the thing of itself engages our attention.

Voluntary attention is exemplified when we commence work and before we have warmed up to it; a certain amount of "collar work" involving the use of the Will

is necessary before the subject begins to hold us by its interest. We must work through the initial difficulty of starting the intellectual motor from cold. But if the subject be a congenial one, in no very long time the type of attention changes from Will to Interest; if it should not do so, then there will be the continual effort of keeping the wits from wandering. This means that the work will be far more arduous than if we could really find pleasure and interest in it, and fatigue will the more quickly follow. Under the spell of Interest-attention we lose all sense of fatigue and may even forget our meals—a thing we are not the least likely to do in the other case. Indeed, where we have to keep ourselves up to the mark, we shall probably seize only too eagerly upon the occasion of the meal for the opportunity of a break.

Interest-attention is affected by various conditions, such, for example, as the loudness of the stimulus: we attend more readily to the raising of the voice than to its continuance in quiet tones. The lowering of the voice (or the stimulus generally) tends to change the type of attention, because we are forced to introduce the element of Will in order to follow what is being said. But any increase in the loudness of the voice automatically engages more of our attention, though as soon as we have become accustomed to the new standard of tone, a fresh and further increase in the stimulus will be necessary to call forth more attention.

The variety of the stimulus also affects this type of attention; where the stimulus is monotonous the effect is hypnotic and sleep provoking. Those speakers who drone are apt to lose the Interest-attention of their

hearers, and if they retain any attention at all it is by the effort of Will on the part of those who are listening. Any monotonous sense-stimulus is definitely known to be a soporific, therefore the teacher will at all costs avoid sameness either in the manner or the matter of teaching. We may digress for a moment again to the business world where it is recognized that it is not only goods that are sold, but "goods plus service." It is not only what you sell, but also how you sell, that counts: so also it is not only what we teach, but how we teach it, that matters. Monotonous voice, reiterated gesture, or no gesture at all, tame and ineffective delivery, slurred articulation, and lack of change and variety in the manner of presentation, as well as prosaic and unimaginative treatment of the subject, these one and all are so many items of bad service, however excellent may be the intellectual goods that are put forth. Variety, then, is another way of holding the Interest-attention.

The quality of the stimulus is also important, for nobody would be interested in listening to a raucous voice when he might be hearing a more pleasing exponent. Some voices possess a charm and allurement of their own, and we might listen to them for sheer pleasure of the sound even were they talking nonsense. If the quality of the stimulus—which is merely another way of referring to the voice and manner of the teacher—did not matter, then we could just as easily and effectively learn from the tinny tuition of a gramophone, which—as Euclid would say—is absurd. Therefore we may agree that the quality of the stimulus also matters much.

Interest is the pleasurable feeling attached to an idea ; if the feeling be unpleasant we shall certainly not be interested. It " connects the mind with the matter " and, as an old tag states, " right methods produce interest." This is correct in the main, but the right methods in the hands of the wrong people might easily destroy our faith in the remark. Some people can make almost any subject enthralling, while others can reduce even the most exhilarating topic to the dull level of a Railway Guide. Again, the personality of the teacher is most intimately bound up with the success of his (or her) teaching ; we might even learn to love the most uninteresting subject as a kind of reflection of our love for an interesting teacher. The ancients used to say that " the thinker and the thought are one," and certainly we might suggest that the teacher and his subject are one in the minds of many of his pupils, and that regard for him may very well be reflected upon the subject for which he stands.

In justice to the teacher it must be said that there are many reasons for lack of interest other than that of bad teaching. Bad conditions, such as stuffy rooms or lack of air, are entirely against attention and interest ; with the best Will in the world it is not possible to have alert attention without a proper supply of oxygen. The brain simply cannot work properly under these adverse conditions. Dingy surroundings check the Will to learn in spite of all that we may do. When we enter a dark, depressing room, we are infected with some of its depression, whereas a brightly-lit room predisposes us to ready interest. There is a species of unsuspected and indirect suggestion at work here in

the conditions of our surroundings, playing a larger part in our work than we are apt to suppose.

Bodily conditions may also be for or against our receptivity. We can take little in, and, therefore, can display but scanty interest, if we are fatigued or out of sorts. Underfed children at school are notoriously unable to profit by the instruction they receive. Again, the subject may be unsuitable to the pupil or the pupil to the subject; and in the case of these misfits, as we have already shown, there can be little earnestness and consequently little attention and success. When we find intelligent pupils unable to concentrate their attention on a particular topic, we should consider this point of suitability of subject; for children are always attending to something, and it is probable that their Will-attention has fatigued them and they are finding their relaxation by turning where Interest-attention calls.

A word might be put in here, dealing with the length of lessons. There is no arbitrary length to be recommended, for it must vary from many causes. The one certain thing is that a lesson must not be too long, and when the fatigue limit is reached, the lesson, however short, has already been too long. It is characteristic of the child mind to need change. We ourselves with all our mental resources cannot attend to one single point for as much as a minute without our thoughts straying; how then can we expect children to keep their attention fixed for so long as half an hour unless we afford them change and variety in the subject and its presentation, and give them the opportunity of a little activity on their own account? When children

" learn by doing " they are getting their change in their work and consequently are keeping their interest.

Summing up, we must come to the conclusion that Interest-attention is the thing to be desired and worked for, but Will-attention is frequently necessary at a preliminary stage. With adults this early stage gives an excellent mental exercise, but even then it is not the best method of learning. Life is so short, and the subjects we ought to study are so many and vast, that surely it cannot be spending our time and labour to the best advantage to devote them to those topics that arouse no Interest-attention of themselves in our minds. If it be necessary to study such, it should always be with the idea of mastering them, and in such case it is likely that eventually the feeling of knowledge and mastery will begin to arouse some degree of interest.

Speaking of attention generally, education commences by the consideration of concrete things, and only later on do we begin to form abstract ideas. Show the child some beautiful things and point out the elements of beauty, and afterwards the child will be able, from the consideration of concrete beautiful things, to arrive at an abstract idea of beauty. Another general rule is " attend to one thing at a time " ; a simple enough counsel to be sure, but one which is not infrequently overlooked by the unwise teacher. Praise as a stimulus to attention may also be mentioned for completeness' sake: and finally it will be found that after honest effort has been made, habit will come to the assistance ; then it will become as second nature to tackle all that has to be done with zest and keen attention.

CHAPTER XXII

THE USE OF HABIT

HABIT has been defined as second nature but it has also been called ten times nature. It consists in the automatic response to a stimulus; and its basis is the plasticity of the nervous system, which receives and records the stimulus. Associated with this is the corresponding action, and when this whole process of stimulus and action has been carried through in the same way a sufficient number of times, a brain-track, path, or channel is made, along which the thoughts run with ever-increasing ease and readiness. On the sea coasts the tree bends over to the prevailing wind and finally acquires a permanent curve in that direction, so the rearrangement of cells, and the modification of the structure of the brain, gradually gives the mind itself a bent. Another instance of such modification of structure is the crease that remains in a piece of paper after we have once folded it. In some such way as this, then, the mind is gradually moulded along the line of its habits, and it may truly be said of most of us that we are ninety per cent. habit. But we must, at all costs, endeavour to keep the remaining ten per cent. original, so that we do not become habit to the whole hundred per cent. To make no habits at all is impossible, and our main preoccupation must be to select

those habits which are useful, and to avoid those which can harm us. Habit is a most useful servant but an impossible master.

It is said that "Mind can alter mind," and by this somewhat cryptic remark we understand that, as mind consists of two parts, conscious and subconscious, the former can alter the latter. In evolution up to the stage of mankind, there is only subconsciousness, but with the advent of humanity there come the first beginnings of self-consciousness. The plants know, and the animals know; but it is only man who knows that he knows. Below the human stage there is no free-will, but we have at any rate a limited freedom and choice, in the absence of which there could be no progress. Knowing that we know, and knowing that we can choose, we have with this power a corresponding degree of responsibility to choose the best, and so to make things better than they have been, and to hasten our own evolution.

The subconscious mind is a record of our past experiences, a kind of gigantic reservoir of all that has come into mind; but everything that from minute to minute passes through consciousness serves either to intensify, or to modify the impressions that are already there. Consequently, when the conscious mind commences to regulate this unceasing stream that is flowing into the reservoir, we have mind assuredly altering mind. Since we can thus modify the contents of the subconscious mind, we have this power to make, alter, or break our habits.

We have seen that things consciously reiterated tend to be taken over by the subconscious, and that this

transference from conscious work to subconscious is a tremendous gain. The first of these advantages is a great saving of time, things that are done slowly and laboriously at first, soon become more quickly done, and we need spend the less time. They are also accomplished with a very much smaller expenditure of labour. At first the process may be difficult, but with each increasing repetition the effort becomes less and the speed becomes greater. Furthermore, the things at which we acquire facility, and make habitual, are done with a greater degree of efficiency. The person, for example, who had to measure either octaves or fifths by the adjustment of his fingers, in the early stages might make many slips ; but the skilled pianist, through the accuracy of his habits, makes no mistakes.

Another point is that operations, at first highly complex and involved, gradually simplify under the action of habit, until the complicated movements seem to be the easiest things in the world. Witness the extraordinary apparent ease with which the equilibrist on the Stage can balance billiard balls, umbrellas or top-hats with a simplicity that almost makes us believe we could do it ourselves ; but, when we try, we find that the apparent ease was the result of a wonderful accuracy of adjustment, and the simplicity was only born of long developed habit. This simplicity further results in an ever-increasing freedom, and with this there comes a degree of confidence which can be acquired in no other way. We might, therefore, say that the advantage of habits is that they save time and labour, give increasing accuracy, reduce complex operations to simplicity, and give increasing freedom and confidence.

On the other side of the balance sheet, it must be remarked that habit has its disadvantages, and the first of these is that habit tends to eliminate thinking. As the function of the teacher is largely to promote thought, habit is sometimes a doubtful ally. It is no doubt a blessing to be able to eliminate conscious thinking in a thousand and one routine operations, but the danger is lest this be carried beyond routine operations, and thought be eliminated where it should be present. This is a very real danger.

The second point is that the making of habits kills originality. The very ease with which we have learned to do a thing, militates against our doing it in any other way. We have referred to those people who are one hundred per cent. habits; these are they who have succumbed to this particular temptation which swamps their originality and progressive thought. The third disadvantage lies in the ease with which these habits are made, and the unconscious satisfaction which we derive from them. We are too prone to take the line of least resistance, and our habits are apt to become stereotyped at far too low a level; in other words, we are too easily satisfied with ourselves. Very rarely do we stop to ask of our habits, "Is this the best way, or can I do it better?" Unless we continually keep watch we are prone to grow into the mood of "Let it pass; that is good enough," when really it ought not to be allowed to pass, because it is not half good enough.

The body has a wonderful power of adaptability and will gradually adjust itself to almost any habits which we desire to impose. It will accommodate itself as easily to habits that we make for health, as well as

those that induce disease. But as we have already dealt with the question of health, we need go no further here. In the mental realm we should certainly insist upon good habits in the way of observation and concentration. Law, order and method can be the rule in mind. The feelings also should be schooled, and habits of cheerfulness, kindliness, and enthusiasm should be inculcated. The Will also should be brought into habits of discipline and self-control.

Professor James, the eminent psychologist, formulated what he termed four rules for the formation of habit. The first was " Start as strongly as possible " ; the second—and this is the rule of rules in habit— " Allow no exceptions " ; the third, " Expect and insist on results " ; and his fourth rule was a suggestion that every day we should insist upon some little act of self-discipline or self-denial, in order to assert the captaincy of our own souls, and the dominance of our own mind over matter.

If we were to suggest habits of importance, specifically for teachers, we would classify such as habits of manner, and habits of method. In manner we would suggest that a sympathetic and kindly outlook is one of the prime requisites ; for a lack of sympathy must invariably work against the efficacy of the teacher. There should also be a gentleness, combined with firmness and enthusiasm. Those teachers who are perfectly correct, but chill us by their coldness and aloofness, can never raise in us any enthusiasm.

The second habit is that of regularity and reliability. This of course involves punctuality. We have only too frequently come across the unreliable, unpunctual,

and erratic teacher, who by these habits can do himself little good and may easily do his pupils much harm.

Thirdly, the teacher must be self-controlled and equable. Nothing disheartens a pupil or class so much as an uncontrolled or moody teacher, or one who is always worrying or nagging. The uncontrolled teacher is, as a consequence, nearly always unjust.

The fourth habit is that of carefulness and of conscientious work. Again, there are too many careless teachers, whose standards are slipshod and who are disinclined to take too much trouble. These are the anything-will-do people, and, in point of fact, nothing in teaching will do except the very best.

Finally, we would suggest that habits of neatness are essential. We have a very vivid recollection of our own early pianoforte lessons at the hands of an incompetent teacher, and we remember only too well the untidy mess that was made of the music, by underscoring or putting rings round notes, or making large crosses to attract attention, the total effect of which was to make a copy rather resemble a model of a railway accident than a piece of music. The marking of copies in this way is nearly always bad, for as soon as the pupil begins to rely on the mark to attract his attention he will cease to attend to anything that has no mark. Therefore, more marks and further marks are continually needed, and the process ends by defeating itself, and by disgusting the pupil with the very look of his music.

Habits on the point of method may be briefly summed up as, first of all, system and plan. The teacher whose work is all muddle and fuss is bound to be ineffective ;

and in addition to this, the very lack of plan is apt to undermine the faith of his pupil. The second point is that the teaching should be varied and full of originality and life. The mechanical teacher is really more of a drill sergeant than an instructor, and the monotony of his work is more likely to deaden his pupils than to quicken them.

The third habit in method is that of consistently making the work helpful and stimulating. Doing too much for the pupils, although it arises from a kindly desire to serve them, is yet a mistake. Students can only thrive on their own difficulties and grow by their own activities, therefore, when anyone removes the difficulties from the path and generally smooths the way he is not truly helping or educating. The fourth habit is that of keeping the mental view well balanced, with details clearly distinguished from principles. There are some teachers who spend such an undue amount of time over a particular detail or the perfection of an individual passage, that the general balance of the whole is lost. Sometimes scales and studies are given *ad nauseam* to the exclusion of anything else. The part is not greater than the whole, and the wide vision should never be obscured by the special prominence given to details.

The final point is that the work should be concentrated, and should USE the time. We are all familiar with the diffuse and talkative teachers who waste time. They introduce irrelevant elements, side issues, and personal experiences to such an extent that sometimes the pupil would be hard put to it at the end of a lesson to explain what definite instruction he had received.

All these points, we are aware, are definitely elementary, but as long experience has shown us that all these bad habits are frequently encountered, mention of them may serve here to point out a pitfall or to put a younger friend on guard against an unnecessary and gratuitous difficulty.

CHAPTER XXIII

MUSICAL MEMORY

We dealt in an earlier chapter with the general aspect of memory, and musical memory is but a particular application of the principles there put forward. The three prime points to be considered are Reception, Retention, and Recall, and these are really the same thing treated from different angles. Reception is the act of making the record, Retention is the preservation of that record intact and available for use, while the Recall is the reproduction of the original record. When we put a gramophone record into the machine we get the reproduction, and when we vitalize a brain record we have a memory, and the clarity and accuracy of the reproduction must obviously depend upon the same values in the original Reception. Nothing can make the reproduction better than the record; hence the great attention that must be paid to the first of these three points.

In musical work the senses particularly concerned are sight, hearing, and touch; this latter in pianoforte or instrumental work might be called the sense of muscular discrimination. The degree of development and delicacy of these senses varies greatly with the individual; some may be particularly good visually, others aurally, and some may have a special develop-

ment of the sense of touch associated with what we erroneously term a "muscular" memory. Some visualizers can shut their eyes and call up the image of the copy so vividly before their eyes as to be able to play from it. There is probably no special merit in their possession of this faculty, for we should very likely find that they were born good visualizers. These are the people who find working by sight easier than other methods, and consequently they specially rely upon it and add to their natural faculty by constant use and training.

Individuals who have the strong aural development are in like manner much tempted to rely almost exclusively upon the ear. They have a valuable gift in being able to reproduce things they hear, but they will be likely to do this without having any technical knowledge or theoretic understanding of music. No one would attempt to belittle their faculty, and indeed many may envy them, but it is ever our tendency to work on strong points, and by leaving the weak to look after themselves allow them to become still more weak. The ideal should be to have all these gifts developed in due proportion so that they work together and mutually help one another.

As regards "muscular" memory, there can reside no faculty of memory in muscle, and a better term of description would be an association memory. The various movements of the muscles in the performance of the music have been recorded in the brain, and these are stored in the brain as ready-prepared associations which come automatically into action as soon as they receive their cue. This is not a very high type of mem-

ory, and it has one grave disadvantage in that if the thread of association be broken there may be great difficulty in restoring it without commencing again at the beginning. We observe such a memorizer trying to recall without avail some half-remembered passage. Presently he ceases his conscious efforts and allows his fingers to play apparently of their own volition, and if he happens to strike the line of association the whole thing comes back automatically.

None of these methods need be despised, for they each possess their own particular advantages, as also their particular limitations. But the aim should be the development and co-ordination of the three together, so that the printed symbol appeals to the eye, immediately sounds to the ear, and suggests its execution to the muscular sense. This is the equipment of the true musician, who sees with his ear, hears with his eye, and works both of these senses in conjunction with his keyboard sense, his instrumental or vocal technique.

For the purposes of musical memory, each particular sense will need special training, and underlying all is the necessity for that musical understanding which supplies the meaning to illuminate the form. Without this no intelligent memorizing is possible. Ability to grasp a meaning—harmonic, melodic, tonal, or structural—enables small units to be taken in larger groups, and these groups themselves to be taken as larger units. In training the eye, for example, we cultivate the ability to recognize at sight the combinations of individual notes usually to be encountered. We learn first to enlarge our units vertically, and consequently to understand and think in chords, to grasp arpeggios,

scale passages, and the harmony generally in these larger units. Next we train the eye to follow horizontally, grasping the outline of melody and taking in the phrasing automatically and so gaining a sense of the general rhythm, balance, and form. In counterpoint, the eye must needs follow the line of the individual parts, which is merely an extension of the process of grasping the melodic outline in extended units. Further the eye must be trained to recognize the tonality, the key changes, and all the thousand and one accidentals and incidentals connected with these, and to take in at rapid speed cadences, sequences, rhythmic and melodic figures, passage work, and florid ornamentation generally.

The ear must be trained to achieve the same result in its own department, to hear vertically and to recognize chords and harmony. It should be able to hear horizontally and to acquire the same feeling for melody, phrase, rhythm, and form, as does the eye ; and right from the beginning the eye and ear effects should be allied. The eye should not see without reference to the musical value and effect of that which it sees. The recognition of key colour and key contrast should be developed, and, as in the case of the eye, the ear must be quick to recognize cadences, sequences, and so forth. The training of the ear in this way has the difference from the training of the eye, in that sounds are fleeting things that must be quickly grasped as they quickly pass, whereas the printed symbol remains before the eye and can be quietly studied at leisure.

The training of the muscular sense, whether for instrumental or vocal performance, again must follow

on similar broad lines and then the whole three must be developed in co-ordination. Here it might be mentioned that the inexperienced teacher frequently makes a great mistake with his elementary pupils in endeavouring to teach too much at a time. When a small beginner at pianoforte work is set to grapple with his ear problems, eye, and muscular problems simultaneously, as he too often is, he is being set to attempt the impossible. One thing at a time is a maxim both of education and of common sense. When the extraordinary complexity of these mental operations is realized by the teacher, he will probably simplify his methods by dealing with single problems singly, to the great benefit of his pupils and to the betterment of his results.

It is somewhat difficult to deal in book form with actual exercises for aural analysis and musical memory, though they are quite easily given in practice, but we may just indicate some of these so that the suggested lines of study may be clear.

1. Let a very short and simple melody of four bars be played over on the instrument by the teacher, and after it has been repeated let it be sung or hummed by the pupil, and also let it be reproduced on the instrument, and finally be written out. If four bars prove too difficult, take two, or even one, but be quite sure to start with something that can be accomplished. This exercise may then be changed round, and the melody, having been written out, may be first learned by inspection, and then played or sung from memory. Another variation is for the teacher to hum the melody, and then the student may write it down, afterwards playing it

from memory. The length and complexity of the melodies may be increased to any extent desirable as facility increases.

2. Recognition of simple chords played upon the instrument. Thirds and sixths may first be practised, and then common chords in root position ; when these are found easy, the inversions of common chords may be taken, and the distribution of the chords may be varied. Some practice may then be given in the recognition of like harmonies in arpeggio form. All these exercises should be adapted to make eye and ear work together, the sounds heard should be written out, and those written should be heard, and reproduced from memory by singing, or at the instrument. As facility grows, the range of chords may be extended to sevenths, ninths, and so on, as well as the varieties of sixths. After a time this faculty of recognition will become automatic and instinctive, but every means should be taken to train this ability, because of its fundamental necessity for musicianship.

3. Recognition of simple chord passages. The teacher may play an easy passage once or twice and then the student will write this down on paper. The first attempts must be quite elementary, for example, a short phrase in thirds without skips ; then one in sixths, and from this the exercise may be graduated to any degree of difficulty desired.

4. Listening to individual parts. Here is an exercise for directing the attention ; in four-part harmony the ear will listen readily to the melody, but it should next be trained to hear the bass. Then the alto part may be followed, or the tenor, until the ear is able to

discriminate and follow any particular part. The process may be carried further by training the ear to pick out the sounds of individual instruments in the orchestra.

5. Ear tests. The teacher plays a simple common chord on the instrument, stating the names of the notes or not, and then proceeds to alter one of the notes up or down. The student is then asked to say what is the actual alteration, or to write the original chord and its altered form. A simple test of this kind frequently yields quite surprising results, and we have come across teachers of long experience who make astonishing mistakes in saying what has been done. But if they cannot hear intelligently, how can they hope to remember? When one alteration can be correctly followed, then two notes may be varied, or three.

6. Melodic phrases, combined. A little two-part exercise may now be given, to be heard and then played from memory, and to be written down; or the passage may be visualized and then reproduced from memory on the instrument. This work can then immediately proceed to definite memorization, by easy stages, of some very simple musical composition. Here is the utilization of all the general theoretic knowledge, combining with the sharpening of all the mental faculties, and the net result is a brain-training exercise of the very greatest value; ordinary mechanical memorizing is not to be compared with it. Moreover, when a work is thus grasped it is known in a far more thorough way than is usually the case; and this method helps to give an efficient and musicianly grip which is too frequently conspicuous in the student by its absence.

A final point may be mentioned. When the aural training and that of the muscular sense have been carried through side by side, a simple passage may be memorized by inspection and interpreted muscularly in one key, then by its mental transposition into another key this can surprisingly easily be carried through into that key at the instrument. But throughout, the beginnings of these exercises must be absolutely simple, and the steps gradual, for the confidence should grow with each success, instead of being shaken by failures. Practice in this way should be regular and continuous, and the student should get into the habit of demanding more and more from himself. Just as the self can train the body to greater efficiency, so also can the mental processes be trained with an equal certainty of result. We suggest that the teacher should not be content with theorizing about these possibilities, but should put them to the test. It will then be demonstrated that an enormous amount can be done by comparatively simple means to develop the power of musical memory.

CHAPTER XXIV

DISCIPLINE AND CLASS WORK

Discipline precedes all effective teaching in class, and, rightly considered, is something a great deal more than the ability to keep order or to drill pupils into submission. It has been termed "a force for mental training." All concerned in educational work are well aware that some teachers are hopeless as disciplinarians, and that others seem never to have any trouble at all. The life of a class teacher who is unable to maintain effective order and behaviour in his work is one long round of misery, and his days are scarcely to be endured. The best discipline is that which has not to be asserted, but seems rather to be the normal atmosphere which accompanies the successful teacher into any class where he may happen to go. Where the teacher must be continually clamouring and shouting for silence, we may be quite sure that there is something lacking in his methods.

One of the most important things for the teacher is to begin right, as he intends to go on; it is a far more difficult proposition to restore the discipline after once it has been lost. The first impression made upon the class is very important, and, as an audience is apt to take its cue from the indications given consciously or unconsciously by the performer, so does the class also

from the bearing and manner of the teacher. The advent of a new teacher always arouses expectation, and the class are only too eager to seize upon any sign of trepidation or diffidence, and only too anxious to have the slightest opportunity of testing the teacher's mettle. He should, therefore, be quite sure in advance that his own self-control is absolutely established, and he should rigidly insist on right standards of behaviour from the very commencement.

It is no bad plan to have a little preliminary talk with the class, explaining to them the object of their study as being for their future service to their calling and their country. The teacher may then proceed to explain that his own function is to assist them, as to the method of study and the matter to be acquired, and to help them out of any difficulties. The fundamental means of accomplishing this study to the best advantage will obviously be co-operation under the best conditions, and those conditions, for the sake of all concerned, they will naturally be expected to supply. In maintaining these conditions the teacher should avoid shouting, and if he wishes to be particularly impressive he may even drop his voice a little, thus compelling the class to attend more closely in order to hear. He will, of course, see that one order is obeyed before he gives another—an elementary point which is often overlooked.

Discipline necessarily involves obedience, but it should be of the right type. There is no merit in, and no educational benefit to be derived from a slavish obedience that springs either from fear, or from hope of favour. Law and order based on fear of consequences has no moral value whatever, while that arising from

the hope of benefits to come is almost worse. There is nothing, perhaps, that more completely puts an end to discipline, and eliminates the respect of the class for the teacher, than any concessions or special treatment accorded to those who lay themselves out to curry favour. The teacher must be absolutely just and impartial, and even if he gains the title of " beast " he may also gain the time-honoured compliment of being called a " just beast."

The mechanical obedience brought about by the " Do-it-and-don't-argue " type of treatment is very little better than the slavish type, for the pupil who renders obedience of this kind is not developing his moral character in any material way. The only obedience that is truly worth while is that intelligent and co-operative work arising from the realization that the interests of the teacher and the class are mutual. This comes perhaps in part from the little preliminary talk, and also from a realization of a sense of responsibility on the part of the class which leads them to exercise their self-control, thus maintaining law and order automatically. The teaching then gains its full effect, and the important element of purposive and intelligent self-control is being engraved in the character.

Rules and regulations are to some extent a condition of discipline, but these rules should be as few as possible, and they should be reasonable. It should also be understood by the class that rules are not merely unpleasant things intended to hedge about their activities, but that in reality no one makes rules, they rather occur out of the feeling of society as to what is necessary for the

comfort and well-being of its members. Generations of individuals have decided that, as certain things produce unpleasant results, it is undesirable to do them. A little point like this might well be explained to the harmony student, when it is suggested to him as a rule that he should not write consecutive fifths in his exercises. If the class understands that rules are but measures adopted in a community for its own welfare and protection, there will not be that animus against them which so often exists. But whatever rules there are, it is perfectly certain that they must be kept.

Discipline also presupposes authority behind it. This authority may be that of the " Head," or it may be a sort of feeling which pervades the school or institution. In such case, the general atmosphere or tone of the school may, by the force of suggestion, impress the minds of the newcomers so that they very quickly fall into line with the general tone of law, order, and self-control. The class teacher is at any rate the immediate authority for his own class, and he will be very wise to maintain his own discipline without continually running to some higher authority for reference and support. Headmasters and mistresses automatically mark down a teacher who is continually calling upon them for aid in this way as a bad disciplinarian.

The maintenance of discipline, as a last resort, involves the use of punishments. But any necessity for punishment is a tacit admission that the discipline has already broken down. The fewer the punishments, therefore, the better. Also the object of the punishment should be most clearly understood both by teacher and pupil. A vindictive element ought not to exist at all, the real

basis being an association of ideas. Certain lines of conduct, if persistently followed, will be bad for the individual and for the community ; therefore, to that line of conduct an unpleasant consequence is attached by the punishment, so that, when the idea of that conduct again appears in mind, the thought of punishment will also come up to act as a deterrent. Punishments, when rightly considered, are seen as aids to progress. Let the few punishments be appropriate, and let them fit the crime, rather than the mood in which they happen to be given. Having been given, perhaps in the form of keeping in, or of extra work, let them be rigorously exacted. If the idea of the corporate unity of the class be instilled right from the beginning, the feeling of individual responsibility to the class will be likely to engender a spirit which will reduce to a minimum the necessity for any punishment at all. What is termed the " discipline of consequence " may sometimes be put in effect with advantage to demonstrate the futility of ill behaviour. A boy breaks the rule about throwing stones, and in breaking the rule breaks also the window ; then the natural consequence is that he has to pay for the repair of the window out of his pocket money. Nobody should pay for that window for him, because the payment is the discipline of cause and effect. It tends to show him the larger view that the rule is to save him from himself, and that people are not punished, but rather they punish themselves.

A class is a crowd and as such its psychology is different from that of an individual, and classes are either easier or harder to handle than single pupils. The characteristics of the teacher to a certain extent deter-

mine which of these it shall be. In individual lessons we frequently find that some pupils are a great drain upon the vitality of the teacher, in that they do not supply their own energy, but are apt to exist, vampire-like, upon the vitality of the teacher. Other pupils may perhaps have even an exhilarating effect. Every artist knows that, as a public performer, he derives no small part of his success from the vitality supplied by the audience, which he can draw upon and manipulate as an organist plays upon his instrument. There is something of this same process at work as between teacher and class, and a good disciplinarian finds that the energy thus supplied by an interested class prevents the drain upon his own vitality.

A crowd is truly the average of its individuals and, as a consequence, exceptional qualities in the crowd tend to neutralize each other, the extremely clever being counteracted and balanced by the extremely dull, while the more commonplace qualities are reinforced and very greatly accentuated. This means that, as a whole, the crowd is not nearly so intelligent as a great many of its individuals, and these individuals tend to have their outstanding personalities submerged in the less worthy whole. A crowd, therefore, becomes somewhat like a great big baby, not very intelligent, but considerably more emotional. Do not we ourselves, as members of a crowd or of a large audience, frequently laugh at things which would provide us with no amusement whatever in our individual capacities, and are we not prone to accept statements thus that we subsequently refuse to admit when alone? In such cases as this, we have succumbed to the mass-suggestion.

A crowd, again, is more submissive and yet more rash than its individual members. Under the general infection individuals will do collectively what they would never dream of attempting individually.

So that, if we consider the class as a crowd, we shall realize that its calibre is below the level of intelligence of many of its members, and that we can only work successfully according to the general average. This will necessarily, even so, be too fast for the slower pupil, as it will also be too slow for the clever. We can make definite use of suggestion in the inculcation of good discipline, manners, and desire for progress. Furthermore, the class is a unit, and it must be kept as a unit while the teacher is giving instruction. As soon as he gives a class something to write out individually, or when he attends to one pupil separately, the class ceases to be a unit and becomes a collection of individuals. No teacher can instruct a collection of individuals.

Another characteristic of the crowd is its demand for leadership, and the leader is always, as it were, outside the crowd; if he merges his individuality with the crowd he ceases to be a leader. The teacher should be with the class, but not of the class; he should be one of them in community of aim and interest, but he should not be one of them in that easy familiarity which may very well lead to contempt. Should the teacher be unable to maintain his leadership, he may be quite sure that the class will choose a ringleader from among themselves, and this at once is insubordination and the negation of discipline. But the ability to lead a class confers a privilege of no mean order, in that it enables

a teacher to " direct, control, suggest " day by day the minds of the pupils in ways that will bear fruit in coming years. Many a man looks back and sees that some idea, which has perhaps been the inspiration for his life's work, is the out-growth of a seed of thought planted, it may be all unknowingly, years ago by his master or class teacher. Thus it is for the class teacher to sow his seeds of law and order, as well of learning and scholarship, trusting to a higher power in the efflux of time to give the due increase.

CHAPTER XXV

CLASS WORK AND SINGING CLASS

PROFESSOR ADAMS in his book *Modern Developments in Educational Practice* remarks that one of the most notable features of present day education is the reaction against class teaching. There is no doubt that modern innovations such as the Montessori method, the Dalton plan, the Play Way, and other systems have made their influence felt in opposition to the restrictive and compressive elements in class teaching. We feel, however, with special reference to music that subjects such as Theory are better and more economically taught in classes than individually, while singing and choral classes and orchestral work have their very existence in collective working.

One of the most essential qualifications of the teacher for effective work in class is the ability to express his remarks in clear and ordered fashion ; diffuseness and haziness must at all costs be avoided. But no power on earth can secure concise explanation from muddled thoughts ; and where aimless and incoherent sentences end " up in the air " and the explanation must be eked out with a gesture, it should be recognized that the speech of civilization has failed and that the speaker has perforce reverted to the gesture of the savage days. It is a good plan for the teacher who experiences any

difficulty in this way to practise alone the art of definite explanation, aloud in words or in writing. In this manner the clarity of impression is tested by the expression, and it will only too frequently be found that the things that were thought to be perfectly clear in mind are by no means so. We cannot too strongly emphasize the value of extempore explanation of this kind, and we suggest that in the ordinary speech of every day we should do well to insist upon perfect definition and accuracy, demanding that our words shall express exactly what we mean, neither more nor less. If this be the standard aimed at and achieved during every day, there will be little difficulty in securing in class that lucid explanation which is one of the hall-marks of the good teacher.

The elocution of the teacher should also receive much attention, for, if the diction be careless or the consonants slurred, then the students must use so much effort to follow the teacher and to find out what he actually said that they tire the more readily, and thus the value of the teaching is impaired. It will also be necessary for the children to use Will-attention instead of Interest-attention, which again is no advantage. The frequent use of the blackboard is particularly valuable since it appeals to the visual sense, which is perhaps the strongest of all, supplementing the message received by the spoken word. In the use of illustrations the teacher should beware of making these so interesting as to sidetrack the attention away from the main line, and it is a good plan to keep a mental map, or bird's eye view of the subject so that the whole lesson is dealt with in due proportion.

Emotional teachers are sometimes carried away by this or that aspect of the subject to such an extent that the due balance of the whole is, for the time being, lost.

The teacher of music will only be likely, in the general way, to have class work in theory and harmony, with perhaps a singing class or small orchestra. In ordinary school work the class most frequently to be met is that which comprises theory, singing and sight-reading. The theory, as we have before suggested, will best be taught upon musical appreciation lines, and the child will be introduced to the thing before he learns its symbol. The elements of rhythm can be taught by tapping, clapping, marching, and so on, and then the work will proceed along the usual lines to melody, tonality, harmony, cadences, the elements of form. For these the reader must be referred to some standard manual upon Musical Appreciation, since such does not come within the scope of this work.

Dealing specially with the singing class, the first point to be attended to is the breathing. The children will be taught the correct methods of lung expansion, being shown how to secure full inflation. For this purpose they may stand with elbows out and hands placed lightly upon the lower (floating) ribs; as they then take in a slow breath, while the teacher counts audibly in seconds up to six, eight, or thereabouts, they should be able to feel the sideway expansion of the lungs. If the class be standing in line when the elbows are turned out there will immediately be fighting and disturbances if the pupils are boys; what will happen in the case of girls will largely depend upon

their degree of emancipation. But if, before the exercise is commenced, the children in line take a half turn to the left or right all the elbows will then be clear and the opportunity for disturbance will not arise.

After the breathing, the next point will be the production of the tone, and here the less said to children about the machinery of the voice the better. It is a good thing to start by getting the class to hum lightly to the M or N sound a note somewhere around the G above middle C, and this they should feel buzzing or vibrating in the nasal cavities. When they can feel this perfectly comfortably they may then start a note in the humming and gradually change it into the open vowel Ah ; care must be taken to keep the humming feeling exactly where it was, and the action may most aptly be described as " smoothing " it from the one into the other. The result should be a good forward tone, but if the tone be not forward enough the vowel A, as in " may," should be used, and then A changed to the Ah. In spite of all that has been said on behalf of the " oo " production, we strongly object to it as producing an unnatural style of voice and diction, and consequently except in quite special cases we refuse to use it.

The vowel tone may next be taken by itself without the preliminary humming, but the forward ring must still be kept. This is the safeguard against throaty singing, for as soon as ever the voice seems to be located in the throat we may be quite sure that we are off the right lines. If the voice be breathy the best exercise for remedy is the practice of single notes, detached,

and with both the beginning and ending clean cut; this is no bad exercise occasionally for the whole class.

Now we proceed to take a higher note, say the octave G above the former, or the F or F sharp below this octave. Again we commence with the humming which this time for the higher G will be felt right up in the head towards the top of the forehead; the lower and the upper G may be repeated alternately several times until the difference in the "placing" from the nose to the forehead becomes perfectly clear and easy. Then starting from the top G and descending the scale, the humming will also be felt gradually dropping from the head position to the nose. When this also is clear the vowel tones may be taken, being felt in exactly the same manner; but, however far the voice may be taken downwards the placing or feel of the voice must never be allowed to drop from the forward facial position to the throat.

In some thirty years' experience of singing classes, in following this method we have never found any difficulty whatever with breaks or registers. We insist on one clear uniform method of production, right from the top of the voice (which is generally considerably above the top G) to the very bottom; and any break we believe to be an evidence of faulty production, no matter how eminent may be the person in whose voice it occurs. We believe that the so-called chest voice, which terminates upward about the F above middle C, is itself a spurious mechanism which in time seriously damages the voice. All scales and training should be done downwards until a satisfactory production is firmly estab-

lished. Working in this way we have never been troubled with faulty intonation, while every now and then children who have had nothing but the regular class training without any individual work have come out with rather surprisingly good results.

Vowels will be the next care, and then the consonants and the general diction. Vowel tones carry, and consonants, being merely explosions or interruptions of tone, do not; therefore, if the words of a song are to reach the audience so as to be intelligible the consonants must be specially emphasized, or even exaggerated, to allow for this loss in transit as compared with the vowels. This point is of great importance in ordinary speech, and many teachers might pay attention to it themselves with advantage.

In teaching sight-reading we ourselves make only limited use of the Sol-fa syllables, regarding their chief claim to usefulness as lying in their application to the memorization of intervals. We prefer to write out a scale in consecutive notes on the blackboard; then with a pointer to train the class to sing them first as next-door notes, and then as intervals, and finally when we point to the notes, one by one, as easy tunes. In a very little while the rudiments of sight-singing from the staff become comparatively clear. Then, instead of pointing to the notes, they are written on the blackboard in the form of a melody, which is read without much difficulty. Quite obviously many important points have, for the time, been omitted and disregarded, but we are teaching one thing at a time, and when the principle has been firmly grasped the details can be added later.

Having now taught the class to sing simple melodies at sight, we revert again to our scale upon the blackboard. The class is divided into two, and we take two pointers, one in each hand ; one half of the class will follow the one pointer, and the other half follow the second. Thus we proceed to give the simplest of two-part exercises, having the voices moving in thirds or sixths, or having one part move while the other holds a note, increasing the difficulty of the exercise as progress is made. In two or three lessons the class can sing in two easy parts, with some confidence, at sight.

Rounds and canons are helpful in securing independence in part-singing, and the next step is to take little nursery rhymes chosen by the class and to set them to music on the board. After the class has read the tune and sung the words to it, each member may sing it individually, and, in order to keep the interest of the class in each performance, it is a good plan to have two or three bars of chorus at the end in which all may join. From this point the teacher will proceed to songs such as his fancy and insight may select, but in general it may be said that it is only good music which can bear the strain of repetition and still sustain the interest of the class. The standards attained at different schools vary tremendously, ranging from the negligible to the performance of Bach's great B Minor Mass, which was performed by the school, singers and non-singers alike, at Oundle in 1924. This was a truly remarkable achievement, and one far beyond the powers and resources of the average public school ; but the standard, whatever it may be, is largely set by the teacher

who is responsible for the music, and here once more is the responsibility of teaching being brought home to us. Great judgment is needed to balance the ideals by the realities of the situation, but there is no need to be too easily content or to refrain from attempting to do a thing just because it has never been done before.

CHAPTER XXVI

POINTS ON PERFORMANCE

We may consider performance under the two headings, what to perform, and how to perform. The point of what to perform is by no means a simple one, as the choice of music has a very great deal to do with the success of the performance, and we have to fit in with three requirements ; the music must suit ourselves, it must suit the audience, and it must be fitting to the occasion. It is by no means easy to satisfy these three at once.

The music must make its appeal to us, otherwise we cannot hope to carry that appeal through to the audience ; it must be at any rate not incongruous with our own feelings, ideas and emotions. Secondly, it is of comparatively little use to give the audience something that is entirely beyond their powers of comprehension. They can only understand music in terms of their own musical experience, and to give them something merely because we think they ought to have it is asking for trouble. As we mentioned in the chapter dealing with sympathy, it is absolutely essential to secure a point of contact. After we have secured that contact, we can, perhaps, lead the ideas of our audience upwards, but we shall never be able to do this if we

simply adopt the plan of giving the public what we think they ought to want, and allowing them to take it or leave it. We need scarcely enlarge upon the necessity of suiting the music to the occasion, for no one with any sense of the canons of artistry will in this be likely to make a mistake.

Perhaps the most important thing about the music we perform is that it must be sincere and have some spiritual content. This specially applies to songs, the words of which, for preference, should have some poetic value, and while not devoid of sentiment, should avoid the pitfall of sentimentality. If they happen to be translations from a foreign language they should contain as little of nonsense and bathos as possible. Where there is a choice of composers as to nationality, while other things are equal, the preference may surely be given to a native. If the performer be drawing up a scheme for a recital he will pay due regard to balance and contrast, and will not overlook the scheme to which we referred in an earlier chapter, when dealing with the "Law of Sale." Neither will he forget that to be original and to express the sincere and genuine feelings of the self is of far more importance than performing to a stereotyped and conventional pattern.

When we come to deal with the question of how to perform we may conveniently divide the subject into the headings of before, during, and after performance. Preparation for performance consists firstly of the technical work, upon the purely musical side of which, here, we have nothing to say. But practice may with advantage occasionally be carried out in front of a mirror, so that the performer may have some idea as

to how he appears to other people; he will then use his judgment as to whether he should make any modifications. The ability to reach the day of performance and the top of one's form at the same time calls for the exercise of considerable judgment, but staleness, as we have pointed out, can largely be avoided by mental practice, and the technique can be kept up to standard by the same means. Secondly, the intellectual and mental preparation will have included a thorough knowledge both of the inside and the outside of the work to be performed. In the mind's eye this will be placed in its true perspective and its proper historical setting, so that it may be played according to the spirit rather than the letter. The wise student will further have studied the life-story and the love-story of his composers, so that he is able to set his constructive imagination to see the music as from their eyes and to play it as from their heart.

The nerves also will have received due attention, and through thought-control the wise performer will so have established his dominants of confidence, comfort and pleasure, that when he arrives on the platform his nervous technique will in every way be as sound as his muscular. It is an excellent plan to rehearse in the mind's eye the whole scene and act of performance. This may be so deeply engraved as a pattern that, when the occasion comes, the run of our thoughts is thereby determined. The performer is always a positive element and the audience constitute the negative. They are receptive and ready to be influenced. The performer should, therefore, beware that he does not influence them to his own detriment, for, should he go on

to the platform unconsciously radiating the thought that he would rather be anywhere else than where he is, the audience may very well think so too.

A word may also be said about the physical conditions necessary for successful performance. It goes without saying that the body must be absolutely fit; but before the performance, for an hour or two or possibly more, there will probably be a kind of stringing up of the whole nervous system. This is not fear, but this is the extreme sensitiveness of the artist which can alone enable him to do his best work. If the hour of performance approaches and there has been no sign of this preliminary stringing up it is quite certain that the performance will not be up to standard. It is impossible to lay down rules that will be generally applicable, but personally we find that performance is best done upon the lightest diet. There are always people who will be ready to welcome a performer out to a good square meal or to dinner before his ordeal, but he will be well advised ruthlessly to refuse all such invitations and to content himself by a period of quietness before performance, with little or nothing to eat and certainly nothing in the way of alcohol to drink. Should any symptoms such as a slight attack of diarrhœa manifest themselves, they may be regarded as Nature's protective mechanism, which is at work, better than we know, endeavouring to fit us in the best way possible for our tasks.

We may next consider one or two points during performance. The deportment is not a matter that can be overlooked, for it is difficult to be predisposed in favour of an individual who slouches or gambols on

to the platform ; we may even be disposed to doubt his artistry. Again, practice before a full-length mirror will tell the performer more than many words. The expression should betoken pleasure, but the features certainly should not be stereotyped into a grin. Mannerisms should be avoided, and anything that savours of " side " will be apt to damage the performer's chances before he strikes a note or utters a sound. Let the bearing be natural, and the dress attractive, so that the first impressions of the audience may be those of that favourable attention which, we hope, will lead on to interest and enthusiasm.

The performer, unless in very exceptional circumstances, will dispense with the copy of his music and will do all his work from memory. If not, we may very well ask why not. If he knows his work, then he does not need his copy ; if he does not know his work, then he ought not to be performing. The copy suggests diffidence to the audience and tends to destroy their faith. But, perhaps, the most important thing of all is that the copy nearly always comes between the performer and his audience, and he is unable to gain that eye-to-eye connection which is so valuable as a means of communication. The performer is on the platform to transmit a spiritual and emotional message to his audience, but he certainly cannot do this adequately if he has to keep his eye buried in his copy. Moreover, when the music has been dispensed with, the performer, feeling he has burned his boats, summons up all the faith that is in him, and on that faith he is carried triumphantly forward. If he distrusts himself, his attention will be kept addressed to himself, and this

is one of the most certain ways of inducing an attack of the nervousness of fear.

We have said that the performer is there to radiate his emotional and spiritual message, and he should regard his performances as a privilege and a responsibility. He may picture himself in his mental rehearsal for his performance, as a very definite radiating centre, receiving unlimited power from spiritual sources, and passing it on far and wide to all his audience. The function of a performer is that of an interpreter and a prophet of spiritual things, and only in this light can the highest work be accomplished. Those who essay these high tasks in the proper spirit, whatever form their art may take, are ministering to their day and generation. This, indeed, is the sole reason of performance ; but when this is carried through for any lesser reason, or for self-interest, it is inevitable that these lower thoughts clog the channel of inspiration, and render the work sterile.

With regard to the strain that is very frequently encountered after performance, the unwinding which is the reverse process to the preliminary stringing up, we may call suggestion to our aid, and thus avoid hours of sleeplessness which are only too apt to supervene. If we have to perform night after night it is of all things essential that sleep be secured in fullest measure. Suggestion directed to eliminate strain after performance, and to ensuring sound sleep at night, may be given with the greatest advantage.

With regard to the performer himself we see that public work calls for a high degree of general development ; all the faculties of mind are concerned in work that is worth while. There are demands upon intelli-

gence and thought, the memory and the imagination; the emotions must play their part and the Will must be paramount. A high degree of self-control is called for, coupled with the supersensitiveness of the artist; with all these we have, on the lines of Izaak Walton's "Compleat Angler," our Compleat Performer.

A final word on another and yet associated topic—that of school performance—may be added. We suggest that school performances are, as a rule, far too long. The reason, of course, for this, is the very laudable idea of giving as many pupils as possible prominence, but the general effect is to tire the audience. This is an anti-climax, and the mark of a bad programme, for the performance should always come to an end while the enthusiasm is at white heat. Every item should be timed beforehand, so that the programme may end within two minutes of the appointed hour. Those who sing should not be allowed to have any copies, but their work should, for the reasons we have put forward, always be done from memory. Where classes come on the platform they should know their places absolutely, and should have been drilled until the coming on and off can be carried through with perfect ease and order. It is a good plan to have the platform chalk-marked, so that the ranks can toe the line of the floor-board; the youngsters should also be numbered up, so that their places in the line are known and kept. Lastly, it is a mistake to let the tone of a school performance down by choosing unworthy work, and it will be found that even with young children there is an instinctive feeling for music that is true and sincere, and especially so if it possesses some imaginative appeal.

CHAPTER XXVII

THE AESTHETICS OF SOUND

All sound as we know it is a matter of vibration of the atmosphere, reaching the ear with a rapidity that varies roughly from forty to forty thousand impulses per second. Something initiates a disturbance in the air, and the impulse is distributed by waves which go out in circular fashion, as we see when we throw a stone into the still waters of a pond. The water does not actually travel to the margin of the pond, and neither does the atmosphere itself move from place to place; but the wave passes through the air, as an impulse may pass through a row of stationary billiard balls in contact and send only the last one flying.

The pitch of a sound is determined by the rapidity of the vibrations. Middle C on the pianoforte has about 256 vibrations per second, and as sound travels 1,135 feet per second at a temperature of 60°, each wave is about four feet from crest to crest. A two-foot wave would be an octave higher, and an eight-foot wave an octave lower, and so on. The loudness, or intensity of the sound is determined by the size, or amplitude of the wave; a small-sized wave will only carry us a feeble sound, while the out-size wave of an explosion may terrify us by the volume of the sound, and may even smash our windows.

But no note, at any rate in music, is a simple tone ; for each fundamental tone, as we call it, has a number of over-tones on its back which make it just what it is. A man may have in the main a lovable character, but he may have a number of little peculiarities which are added to his character and determine his personality. So every note has its own individuality made up in this way. A flute and a trumpet sounding a note of the same pitch will give quite a different effect just because the flavouring of the over-tones makes the tone quite individual for each instrument. When we speak of " tone colour " it is just this flavouring, by means of the strengthening or minimizing of the over-tones to which we refer. Thus the composer paints his musical colour scheme by the aid of the instruments that will yield, when combined, the desired result. One voice differs from another for the same reason, and the over-tones are determined by the various resonating cavities of the pharynx, mouth, nasal passages and cranial sinuses, which must vary in structure and use with each individual. The different variations of " touch " on the pianoforte have the effect of making the over-tones more prominent in the case of " brilliant " tone, or of minimizing them, and giving more of the fundamental in " singing " tone.

When notes are sounded together we get harmony, concord or discord, as the case may be. The first concord, the octave, we have already mentioned, and the numerical relationship of these two notes is as 1 to 2. This interval or relationship we instinctively recognize as satisfying to the ear. In the perfect fifth the relationship is as 2 to 3 ; and in the perfect fourth as

3 to 4. If we had two notes whose relationship were as 9 to 26 we should know without reference to the ear that they would sound unpleasant and cause dissatisfaction. This inevitably suggests that at the basis of harmony in sound there is proportion and balance, law and order, and to an extent simplicity, and that it is far from being a matter of caprice or individual like or dislike. Sounds that the ear considers beautiful in combination have numerical proportion as their base, and the bizarre in sound is mathematical unbalance and the negation of orderly sequence and progression.

Harmonious sounds produce in ourselves corresponding harmonious mental and emotional effects, while discords give rise to tension, discomfort, or other unpleasant results. Soft music lulls, and martial inspires; rhythmic measures scatter our somnolence, and sacred strains stir our piety. An engine whistle may cause acute pain, and the squeaking of a slate pencil make us shiver. There can be no doubt but that emotional effects are produced by sound, but they will be found to vary very widely in individuals. Some may be moved to tears by a violin, others by an organ; some may even have the world blotted out from their consciousness by the playing of an orchestra. Others again in performance liken their condition to a trance state from which they emerge when the composition is finished. Some even find that listening to music makes them hungry.

But now we recognize that mind and body are one, and that emotional effects cannot fail to have their reflex action, through the nervous system and the ductless glands, upon the body. Listening to music

will very frequently entirely change a mood, while many people are able to go to the piano and play off their bad temper and disappointment. If music be capable of restoring harmony to a disordered emotional state, as it is, we see at once how it can produce practical and obvious effects when played to allay a panic, or to hearten souls in danger. So also the rhythmic emotion aroused by the passing of a brass band emerges in action in the way in which we keep step with the music, or perhaps swing our feet if we may not march ; while the jocund dance bids us throw care to the four winds.

Well-being of the mind stimulates the bodily processes and makes for health, and harmony of mind promotes a like harmony and ease in the physical realm. Discomfort in the emotional nature promises its harmful effects in body, and a lack of ease in mind tends to a like lack of ease, or to dis-ease in the state of the body. Since we have seen that music does, as a fact, produce emotional states, and results, either for harmony or the reverse, it is clear that in the mental realm it may be made a powerful agency for harmony, which means sanity and stability ; while in the physical realm the corresponding harmonious relationship it tends to establish, is the state of true health. This, of course, assumes that the type of music is such as may be expected to produce the best results. Jazz music and sensational or ephemeral compositions, being in their own nature unstable, incoherent, or even pernicious, may just as readily produce detrimental effects.

Good music lives because its effects in uplifting and stimulating are found by experience to be permanent ; it possesses a spiritual content which does its work

whenever opportunity is given, and the study and necessary mental immersion in the spiritual atmosphere of such a worthy composition cannot but add its quota to the spiritual growth of the student. Bad music simply tickles the emotions without any element of elevation, and after a time even the emotions rebel and refuse to be tickled ; then the music dies its natural death owing to the transient material of which it is made.

Sentiment is a phase of emotion without which we are poor indeed ; cut sentiment out of the life, and an element is gone which nothing else whatever can effectually replace. But when this sentiment becomes exaggerated or distorted by selfishness, when the emotion begins to get out of control, then sentiment has degenerated into sentimentality and has become unworthy. Sentiment in Art and in Music is valuable in the extreme, as also in Religion, but its excess is always to be deprecated. Taste is the ability to gauge the spiritual content of a work of art, and thus it differs from technical and intellectual judgment. Sentiment, taste and good music all revolve around the central core of spirit in the heart of music, just as truth, beauty and proportion are its essential ingredients.

Our appreciation of music thus leads us quite insensibly, it may be, to a perception of spiritual values. We realize that these can never be expressed in ugliness or disproportion ; that harmonious relationships are in themselves a test of right dispositions, and an alliance with eternal purposes ; that there may be unnumbered variations upon the same theme, as there are limitless variations in the combinations of the over-tones of any

fundamental tone—" diversities of gifts but the same spirit " ; that only law and order are stable, and that discord and degeneracy finally destroy themselves ; that the progress of art, along the true lines, is a progressive revelation and unfoldment of the knowledge of spiritual things ; and that, if a man thinks music in his heart and harmony in his desires, and ever seeks truth and beauty, he will come by that same music and harmony in his own nature.

Thus from the simple vibration of a sound we are led through harmony and its mental and physical effects, by music's way, to know that spiritual unfoldment is ever by the law, and in the law of spirit and truth ; that balance and beauty go with unfoldment, and that health and harmony of mind can come by the inspiration of spirit that lies pinioned in the pages of all the true music that has ever been written.

CHAPTER XXVIII

EDUCATION AND LIFE

All life as visible to us in the outer form is an expression of an inner spirit ; and in all that lives there is this duality of soul and form. The difference between a thing living and the same thing dead is simply that in the latter the soul—the very essence of the thing—has been withdrawn. In the book of Genesis we are given a perfectly clear indication that, not until the breath of life was inspired into man's nostrils, did he become a living soul. Up to that time there was but a body formed from the dust of the earth ; and when that inbreathed spirit is expired, the body returns to the dust as it was and the spirit returns to God who gave it. But the same is the lot of the flower, the bird, or the animal, for these too are the partakers of the same life and inspiration as ourselves, only in these other cases the spirit manifests itself in more limited and humble fashion. So life is for the expression of spirit, in which all the works of the Lord praise the Lord, and when there is no more spirit to be expressed then life is at an end. But, while we live and give expression as we should, we grow in spiritual wisdom and stature.

This inbreathing or inspiration is to be noted as the very essence of life, and we have not generated our own spirit, neither are we isolated or self-contained units ;

we may only express that which we have first received from a higher source. This condition of inspiration holds good for all the worthy work that is done in the world, for, unless there be some touch of the divine fire, the effort must ever lack vitality and influence. Self-contained and isolated work, unrelated to spirit, is mere sterile striving and valueless as Art. The artist with his technique therefore serves as a link between spiritual things and their expression in a mundane world; he fulfils the same function in the body corporate as does the nervous system in our own organism, enabling the tenuous spirit to act upon the comparatively gross matter of the body. This nervous system receives the fine intimations of spirit and transmits them to the muscles which move the body; so the artist receives the intimations of spiritual things and transmits them through his technique, and moves the multitude.

It is the privilege of the artist (and let us remember that the teacher is an "artist in flesh and blood") to receive a greater measure of truth, and he must needs be super-sensitive to apprehend something finer than can reach his less favoured brethren. He may have been born with a finer nerve-sensitiveness, or he may have acquired it through his aspirations, his sorrows, or even his privations; but he must at any rate be able to catch those tenuous messages for which the ordinary man possesses either no powers of reception, or else no time or inclination to receive. The artist is therefore the medium, the interpreter, and the prophet; he is the person who must give out that which has been vouchsafed to him. He may perform on his instru-

ment, he may conduct, compose, or teach, but for every one of these alike the essential qualifications are the same ; there must be the inbreathing and the living spirit, the inspiration without which there can be nothing which is worth the giving out, and then the expression in as perfect a form as may be.

The old materialistic conception of man as a piece of machinery wound up to run for some seventy years is completely exploded, and we are fast coming round to a realization of spiritual things not only as a basis of religion, but also of all Art work and even of life itself. The Victorian idea of the identification of the self with the body necessarily gave rise to a materialistic conception of life, but Science itself is at present very busily engaged in demolishing materialism at a very rapid rate. The study of the structure of the atom has already assured us that solid matter is neither solid nor matter, but that the ultimate basis of the atom—and therefore of all matter—is the orderly rhythm of the circulation of the electrons round their central sun or nucleus. If orderly and rhythmic vibrations constitute harmonious sounds, even though too tenuous for our human ears, then surely it is scarcely too far-fetched to imagine that there is something very like music at the innermost heart of material things. Wireless to-day is yet another discovery that has given the lie to materialism ; while the study of radio-activity and of invisible waves all mark this present transition stage of human knowledge from the phenomena of the material realm to those of that invisible state which is the half-way house to spirit.

Materialism has indeed proved itself a failure even as

a description of the observed facts of Nature, and still more is it being discredited as a policy in life. The present state of the world is testimony to the results that have followed on the acceptance of material ideas and ideals, and we can hope for but little permanent improvement until civilization adopts a more spiritual view and policy. Material and short-sighted aims in teaching are just such another fallacy, for, unless this work especially be done in the light of spirit, it can only be a caricature of what it might be. It is not so many years since the teaching profession was known as " the refuge of the destitute," and at the present moment it is indeed no royal road to affluence, but to the truly inspired teacher its opportunities for service and lasting influence are probably not to be excelled in any other walk of life. The teacher, however, need not look to anyone to raise the status of his profession until he himself opens his eyes to the true nobility and greatness of his calling.

The object of education is far from being a mere training to enable the pupil to earn a good living, it is firstly to fit him to understand something of the nature and purpose of life. Secondly it is to teach him so to adjust himself that he may live life most usefully to the world in which he finds himself, and incidentally with the greatest benefit to his own development and growth ; these two objects indeed are one and inseparable. Mankind is spiritual in nature and we are here to grow by the expression of that spirit which has made us men ; by the expression of that spirit and its corresponding record in ourselves through memory we grow greater spirits. In so far as education ministers to this end

it is doing its rightful work but in so far as it ignores or fails to achieve the same it is missing the mark. The teacher above all must have this vision clear, for without it there can be no true success.

St. Paul in his chapter on Spiritual Gifts—(I. Corinthians, 12)—gives a catalogue of virtues which are extraordinarily appropriate to the teacher. He emphasizes the fact that all these gifts in their diversity are yet of the same spirit; that "there are diversities of operations, but it is the same God which worketh all in all." Concerning these spiritual gifts, he puts it in the quaint Biblical language that he would have us "not ignorant," which is to say that the more we know about them the better; and furthermore these gifts are given to us "to profit withal."

The first gifts are Wisdom and Knowledge: rather significantly he would first set us to work and learn, for without this work and learning how can we possibly teach? And how can we expect to hand on to the pupil that which we have not first acquired? Who also has greater opportunities of learning than the teacher, when each pupil presents him with a fresh page of the book of human nature for study? But the wisdom and knowledge cannot be mere hearsay lore, they must themselves be inspired of the spirit.

The second gift is that of Faith, the feeling to which we referred as following immediately after the service ideal. St. Paul was well aware that in the absence of faith nothing can be accomplished in teaching or in life, he recognized its very fundamental importance and so gave it pride of place, and we may well pray "Lord, increase our faith." If we believe in a pupil's ability

to accomplish, then that faith on our part is an incentive and an inspiration to him to live and act up to that level. But it is also possible for us to believe that the pupil can NOT do this or that, and in so doing we are actually predisposing him to that incapacity.

The third gift is that of Healing ; and healing means much more than mere curing of disease or dosing with physic. The words healing, health, and whole, are all derivatives from the same root, and being " whole " implies a mental well-being as well as a physical, for it is impossible for the body to be well if the mind be diseased or the mental outlook distorted. When the wise teacher ministers to the harmony of the mind and to a like harmony of the body, whether directly or indirectly, by his knowledge of physiology or general hygiene, he is surely doing much towards making his pupils whole, thus illustrating another of the Apostle's gifts.

" To another is given the working of miracles "— and every day of his life the teacher, after having explained some little difficulty to his pupil, will ask— " Do you see ? " and he that before was blind sees. The teacher is continually working this miracle of giving sight to the mentally blind, and on a higher plane he must also bring spiritual sight and insight to the spiritually blind.

The next gift is Prophecy and the discernment of Spirit and the things of the spirit. In every pupil that comes to him the inspired teacher will discern the spirit that lies within, which spirit it is his privilege to nourish, foster, and develop. The whole trend of Psychology is to point us to the inner rather than the

outer, and so to lead on to the discerning of spirit, and this we have already pointed out is the special privilege of the artist. When the artist puts forth his work, whether it be by tongue or pen, brush or instrument, he is acting the rôle of the prophet; for the word "prophet" itself merely implies one who speaks out or gives forth. The means of giving forth will be many, but the spirit will be the same in all; there will be diversities of tongues, but the same message is spoken by all true prophets.

Finally there is the Interpretation of Tongues, whether of men or of angels, and interpretation is, of course, well recognized as of especial importance in music. The spiritual content of the message must first be apprehended, and then interpreted by the technique; some messages may indeed be rather more of men and less of angels, but nothing that is worth interpreting at all can be entirely devoid of spirit. This message the teacher apprehends, and then interprets to his little audience of one, to his class, or wherever he may find his work; but all day long and every day his working is simply this interpretation of fine things in an otherwise dull enough world. Surely it is highly significant that St. Paul should have enumerated a list of gifts so entirely appropriate to the teaching profession.

Then, after an exhortation to covet earnestly the best gifts, he shows the more excellent way, and in the next chapter he points out vividly that all these technical acquirements, of knowledge and ability, of method and artistry, are yet valueless unless they be informed by the living, pulsing spirit of charity and the energizing force of love. Without this, all is empty, and though in

the musical world there are tinkling cymbals without number and there is also much sounding brass, yet when the tinkling cymbals have ceased to sound and the brass is silent there will still be throbbing down the ages the song of songs which alone can give inspiration to the teacher, which alone can make his work of eternal value, which alone can raise him up to the dignity of his great work—the chaunt of a great Charity.

It is on this note that we would close, for there is no greater ; it is to this inspiration that we would point the teacher, and it is in this spirit that we would suggest all teaching should be planned. So striving, there is no possibility of failure, for the teacher realizes himself as the channel through which mighty forces, far mightier than himself, can work, forces which come from the source of that light which lighteth every man that is come into the world.

APPENDIX I

THE BUSINESS SIDE

ART for Art's sake may be an excellent ideal, but so long as teachers are prosaic human beings living in a prosaic world they cannot possibly afford to disregard what we may term the business side. Bills must be paid ; rent, rates and taxes have to be discharged, and the labourer is worthy of his hire. Therefore, as musicians are notoriously rather at a discount when it comes to business matters, it may be of use to devote a few pages to the consideration of some of these practical details.

In the first place, everybody has something to sell, and makes his living by selling it. The teacher is no exception. He has for sale his skill, his technical ability, his wisdom and experience, and, in general, the whole of the fruits of his past education and present labours. In parting with these he must naturally seek a recompense in the service that he gets, for the service that he gives ; and this service will come in the acceptable form of a cheque for the term's fees from his pupil, who is, in the business sense, his customer. The definition of a customer is " one who needs a commodity more than its price," so that a person who desires a thing, but cannot afford to pay for it, is not a customer. This point is at once of importance as soon as the teacher attempts to settle the thorny question of fees. The point of supply and demand cannot be overlooked, because the question of competition necessarily enters

into the consideration of fees. Local conditions also must be weighed, for a teacher might be able to secure certain fees in one district which would be quite unobtainable in another. No hard and fast suggestion can possibly be made. But this point comes further into prominence when we deal with the question of what are termed overhead charges. Many business men have gone into the bankruptcy court through buying articles at five shillings and selling them at six. This seems impossible at first sight, as it probably did to the unhappy bankrupts, but they were unable to distinguish between those two little words which have such a definite difference in their meaning, " net " and " gross." Similarly, there are many teachers who have no idea as to when they begin to earn, and very frequently when they think they are making money they are truly losing.

Our friend with the five-shilling articles disregarded the point of overhead charges. In order to sell at all he probably had to have a shop and possibly an assistant or two ; he had rent, rates and taxes to pay, as well as wages ; he had to provide for postages, distribution, and for advertising. Other expenses in the way of light, heat, insurance and telephone had also to be met. On the number of articles that he sold per week, these overhead charges may have worked out at the rate of two shillings each. Consequently his costs were five shillings for the article and two shillings for handling it, making seven shillings in all ; so that on every one that he sold for six shillings he was actually losing one shilling. Naturally he ended up in the bankruptcy court.

The teacher has also a number of overhead charges which go on, whether he has a large number of pupils or only a few ; but it is very rarely that teachers know

their overhead charges. As a result of this, very few of them know their actual earnings, and it is perfectly possible for a teacher to receive his two or three guineas or more at the end of a term for a pupil's fees and to put the cash into his pocket or his bank account, thinking that it is all profit. This is not the case, however, for some has certainly been absorbed in his expenses. It is impossible for him clearly to ascertain his financial position unless he has first taken the trouble to work out these overhead charges.

Expenses that the teacher will have to meet include rent, rates and taxes. Maybe he gives his lessons in his own home, or he may have to hire a studio ; in either case he has to pay. Those teachers who give their lessons in their parents' houses frequently overlook the fact that the parents are paying part of the overhead charges in their rent. There will then be expenses of lighting, heating and insurance. There will be postages, stationery, printing of prospectuses and advertising matter, and possibly telephone. There will be the supply and upkeep of instruments in addition. All these expenses are tolerably constant. Now, suppose, by the way of simple illustration, in a very small way of teaching these charges amount to one hundred pounds a year. If then the teacher has twenty pupils, the annual overhead charge amounts to five pounds per pupil. Now suppose that our teacher assesses the value of his work at a modest two guineas per term, then for the year he receives six guineas per pupil, and probably thinks that this is profit ; but, as a matter of fact, as the overhead charges have been five pounds per pupil, he actually makes a sum of twenty-six shillings per annum per pupil. The realization of this would probably give him the surprise of his life.

Obviously, it would cost no more for him to teach

forty pupils, in which case the overhead charges would be reduced to half, that is to fifty shillings annually per pupil, and as the number of pupils rises so would the overhead charges per pupil decrease. The teacher would thus earn more from each pupil, although the fees remained the same. This is the virtue of "mass production," as applied to teaching. But clearly it is only a common-sense precaution for the teacher to work out tolerably accurately his overhead charges in order to find out where he stands.

Where the lessons are given in the teacher's own dwelling house, the premises are then being used partly for business purposes, and an allowance may be made accordingly in the return for income tax. Any necessaries in the way of implements and tools, which in the case of the musician are instruments, essential books and music, strings, supplies, and so forth, are also sources of legitimate deduction as being wholly and necessarily incurred in the conduct of the business.

Accounts should be kept perfectly clearly and accurately in proper books, so that in case of emergency, or in the event of the sale of the practice, they would be perfectly understandable and would be a true record of the financial position. Accounts, if not paid in advance, may very well be rendered as they become due, on the first of each month. This to the recipient betokens that the musician, even though he may be an artist, has a certain capacity for business. He thereby earns more financial respect, and his pupils pay sooner; certainly he is less liable to contract bad debts. On the other hand, if the teacher sends out his bill once or twice a year, when he feels like it, then his pupil probably gathers the idea that the teacher does not attach much importance to the financial side, and so he reciprocates the feeling, and probably forgets all about the

matter until reminded again at the end of another six months. Possibly then he has no money.

Lessons should be entered up daily ; if they are left to the end of the week the memory will probably begin to be hazy as to whether it was A or B who missed a lesson in the early part of the week. It is a good plan to rule a 6 in. by 4 in. card-index card with ten or twelve columns for the term's lessons, leaving another column or two for the amount of fees and for the date of payment. The whole term's record will thus lie along one horizontal line of the card, constituting a complete summary of the lessons and fees for that period. These cards can then be kept under the headings of the days of the week, and at the end of Monday's work Monday's cards can then be picked out and filled up in less than a minute, and so on for all the other days.

The teacher may also consider upon what lines the lessons may be planned. The most usual arrangement is a thirty minutes' lesson once or twice a week. Another plan, however, is to have three pupils together for one hour, each of them having twenty minutes individual tuition while the other two listen. If three people are thus taken in one hour the teacher can afford to take a lower fee from each and yet receive the same amount as from two pupils each having half an hour. From the pupil's point of view, and apart from the question of fee, the plan very possibly affords better instruction, because, in addition to their individual work, each pupil is able to learn much in the forty minutes' tuition given to the other two. The plan is certainly worth consideration, and in practical working it has been found very successful.

We might also suggest that the teacher will save time and get more effective work accomplished if the neces-

sary theory and harmony work be taken separately in class, perhaps on a Saturday morning or on some suitable evening. The work can be better done in class than in the individual lesson, where time is so short. A special point might be made in the prospectus that in addition to the private lessons each pupil will have the privilege of attending a theory or harmony class without extra fee; the fees for lessons having, of course, been calculated to cover this in the first instance. Little points like this impress the prospective pupil with the fact that he is likely to get special service from the teacher—as indeed we hope he will.

Whatever arrangements are made in this way in the matter of fees, and also in the vexed question of missed lessons, should be clearly stated in the prospectus. This prospectus, then, is the basis of arrangements between pupil and teacher, and there is an implied contract and an acceptance on both sides. It may be stated that lessons missed by the pupil without notice will be charged, and this will then be the legal right of the teacher. But lessons are missed from so great a variety of causes that the teacher must exercise his discretion as to his line of action in any individual case; a considerate policy of give-and-take is always to be recommended. We have mentioned that printing should always be done in first-class style, and that the prospectus, letter headings, bill forms, and intimations of commencement of term, should also be irreproachable. These create either a favourable or an unfavourable impression, thus helping or harming the teacher.

Supplying music to pupils, when it means that the teacher has to buy and accumulate a stock, is generally found in the long run to involve him in loss. The better plan is to make an arrangement with a local dealer to

supply pupils on an order given by the teacher. As a rule there is no difficulty. On the question of advertising it may be said that direct advertisement is of comparatively little use as weighed against indirect. Publicity is best gained by performance at concerts, recitals, or lectures, or by the holding of some prominent position, such as conductor, organist, or organizer. Pupils' Concerts are invaluable, provided that the standard of achievement be high and the programmes interesting. The publicity gained by the writing of books, or articles in the musical or local press, or by musical composition is very valuable.

Study Groups afford an interesting way of enlarging the circle of musical enthusiasts. Students' Evenings at the teacher's studio or house are a source of both pleasure and profit, and it is even worth while investing these minor occasions with due solemnity and importance by having a printed programme, for the inspiration of " seeing one's name in print " is not to be despised. For the teacher with more advanced pupils the arrangement of concerted items, duets, trios and quartets, vocal or instrumental, as the case may be, is another method of getting out of the conventional groove and achieving a certain amount of public notice. But the best of all methods of advertising is that which comes from the pupils themselves, and there is no firmer way of establishing a successful practice.

The most subtle forms of attraction are dependent upon the personality of the teacher and his outlook on life. If the personality be outstanding and the general run of the thoughts be helpful and optimistic, these qualities will work in unexpected and unseen ways to bring about the favourable attention which means the most subtle type of advertisement that a teacher can possibly obtain.

These elementary points need not be scorned, for though men cannot live by bread alone, yet in these troublous times even the artist will find it very difficult to live by the fruits of the spirit in the absence of bread.

APPENDIX II

COMMON DIFFICULTIES

The bulk of the usual psychological difficulties which are encountered in teaching will be found to have been dealt with, touched upon, or anticipated somewhere in the previous pages ; but it may be useful to enumerate one or two of the points which are always cropping up in questions. These, as a rule, sort themselves out as concerning either the intellect, feelings or the Will ; others again arise from the nerves, the muscles, or the general health ; and there are also those arising from some combination of these, or some lack of co-ordination between the various activities.

Taking these somewhat in this logical order, we find that a most usual complaint concerns a difficulty in concentration, and very frequently the roots of this difficulty are hidden far back in the days of childhood, and the consequent mind-wandering is now established as a bad habit. Originally there may have been many reasons to account for the inattention, and though these no longer hold good, yet the habit to which they gave rise is now firmly rooted. This habit must be supplanted by a better. In the endeavour to do this, great attention must be paid to the little things of every-day, even more than to the big ones, and the concentration must be exercised in all tasks. Mind-wandering is a symptom of a general lack of control, and should be regarded as a danger signal because its harmful results are so far-reaching. Superficial observation is merely

another form of lack of concentration ; it is only too easily developed by the habit of " skipping," by the passing of inaccuracies in practice, or by hazy thinking in general. It should be clearly understood that concentration does not involve tension or rigidity, for such states as these imply the existence of forces in opposition, whereas the aim should be the alliance and co-ordination of all the forces for the desired end. Faulty eyesight or hearing may occasionally predispose to inaccurate observation and defective memory.

This latter difficulty of memory is the one most frequently encountered, and any defects of observation must necessarily show their effects thus. An immediate improvement may be looked for as soon as the concentration and sense training are taken in hand. In many cases it will be found that unintelligent study lies behind memory failure ; perhaps the individual is trying to memorize without the technical knowledge to arrive at the meaning within the form, and this fault in method cannot be remedied by any amount of work. Indeed, some people work extremely hard for very meagre results because their study is not rightly directed. In every case the teacher's task is to diagnose the cause of the trouble, and the remedy then will in most cases prescribe itself.

Memory may be handicapped or impaired by lack of use, or by sheer distrust. If a person does not exercise his memory he can not in reason expect it to develop, while if he distrusts it he is all the while giving most subtle suggestions of unreliability to his subsconcious self. In these circumstances it will in all probability prove unreliable, and he will find, like Job, that the thing he feared is come upon him. Moreover, the surrender in one direction to the memory will conduct to surrender in other directions also ; our character

never stands still, it is ever either gaining ground or losing it. Surrender of control is a progressive process, and it is easier to stop it early than late ; and this little point of memory is just one of those battles that must some time be fought and won by each of us.

In this connection of memory we might again point out the vital necessity for a high standard of bodily health in order that the nervous system may have every possible chance. No intellectual faculty can give adequate results in a body below par, for mind and body are one. The toxin of fatigue may also be responsible for much inaccuracy and many slips, and it is useless to pay regard to the inaccuracies or the slips while the fatigue remains. It is of much more importance for the teacher to change the work so that another brain centre comes into use ; a few breathing exercises may be introduced, some little historical or biographical point may be discussed, or playing may be substituted for singing, and *vice versa*. There may be other causes for fatigue than overwork, and a lack of oxygen is one of these ; many teaching studios in the Metropolis which at best are little more than boxes, where the windows must be kept closed during lessons, leave both teacher and pupil half asphyxiated and mentally incompetent at the end of half an hour. It would pay the pupil better to go to someone who charges a higher fee and has a larger room.

Various difficulties are attributable more to the feeling and emotional side of the nature, and chief of these are the varieties of trouble that spring from fears. Where these have run riot in the mind we have in them a most potent cause of " nerves," and when one realizes the extraordinary agonies (the word is not too strong) and the discomfort through which some people pass by reason of their lack of control, one can only do the

utmost possible to point out that the remedy lies in the development of the right feelings. Better habits of thought will gradually build up a new way of feeling, and the use of suggestion is quite invaluable in this connection. It is hardly too much to say that in this power of suggestion we have the one thing that can "minister to a mind diseased," and nobody should be led to decry its power and legitimate use simply because it lends itself so readily to comic writing in the popular magazines and newspapers.

Mental stupidity is another difficulty sometimes due to the emotions. Here a comparatively intelligent pupil may be intolerably dull and most provokingly stupid at a particular subject simply because he does not want to learn. He may even have developed an unconscious animus against musical work, because it happens to prevent him from playing or from some other occupation in which he would very much rather be engaged. It is possible also that he may dislike the subject because he has no love for the teacher. Cases like these can never be met adequately by punishment, scolding, or anger. The feelings are at the root of the matter, and the teacher must devote himself to developing the better and more helpful feelings. Argument is useless, for intellectual considerations have no weight in the emotional realm.

Laziness, again, may sometimes be referred to the feelings, and it suggests that the individual or the child has ceased to evolve ; his mind is still at the level of the primæval savage who will not do any work except under compulsion. The child's feelings must be led up the ladder of evolution through the cultivation of the idea of unselfishness, to the ideal of service for others. By the stimulus of this inspiration it is probable that the laziness will be more easily cured than in any other

manner. Any past failure or anxiety, especially if the emotional disturbance has been severe, may prove to be a source of trouble, even though the incident may apparently have been forgotten. Here again the remedy is to get at the root of the matter in the feelings, and to dissipate it by a sympathetic talk, coupled with the introduction of more helpful emotions.

The special difficulties in the realm of Will are those of self-discipline and self-control; to the cure of these there is no royal road whatever. But the mistake should not be made of treating music as a thing apart from life; whatever is in the character will naturally come out in action, and in order to remedy some musical defect it may quite possibly be necessary to deal with the general attitude or behaviour. For example, a habit of inaccuracy in sight reading will probably be found to extend far beyond musical work, and it will be comparatively futile to cure it in one direction while it is allowed to remain in another. But most of the difficulties of Will can probably be solved in the light of the remarks in the chapter on this topic.

Faults in fingering and in general muscular action should be dealt with at the source, that is—in the brain. Much more rarely it is the muscles themselves at fault, though there may occasionally be trouble from weakness or stiffness; the body is the instrument of spirit and its technique must be made as efficient as possible. But even in these difficulties it will be found that mental work is the quickest and most effective way to secure physical results. Stiffness arises in some pupils from their very eagerness to do their best; in this case wrong associations are being made, and the teacher should show them that they can be intellectually keen without in any way impeding the flexibility of the muscles.

Confusion sometimes occurs in passages in contrary

motion by the hands getting " mixed up." Here it should be noted that the control of the right hand is located in the left lobe of the brain, and that of the left hand in the right hemisphere. These movements may be accomplished perfectly by the hands separately, but in order that the hands may work together the proper links of association must be formed. This must be done by careful and slow work at first, and the fault probably arises from the omission of this. Complaint is often made of children with defective ears and those who have no voice. The number of these, we believe, is comparatively small, and many of the cases classed as hopeless are in reality nothing of the kind. The real fault is frequently to be found in a lack of these little links of association to co-ordinate the hearing with the muscular side of vocal work. In the majority of cases this can be rectified, but—and it is a very large " but " —the teacher only rarely has time and opportunity to do it.

Gratuitous difficulties are sometimes occasioned by the lighting arrangements of the class or lecture room. There may happen to be an electric light bulb above the head of the teacher, and the eyes of the pupils may unconsciously be attracted ; this leads to a slight eye-strain inducing fatigue of the muscles, with corresponding tendency to sleepiness and inattention. The eye-strain method is well known in the induction of the hypnotic sleep, but it is certainly no aid to teaching.

Occasionally questions of a general type crop up, such as whether difficulties should be removed from the pupil's path ; we have pointed out that the undue smoothing of the way deprives the pupil of one of the chief advantages of education. Latent strength is called into action in meeting the difficulty, whereas easy tasks make no such demand, and the natural resources remain

undeveloped. Should lessons be stereotyped? We would suggest that they ought to be definite as to purpose and plan, but completely adaptable to the mood and the moment as to details. Why are good sight-readers bad memorizers? The reason is usually that they have worked upon a naturally strong faculty to the neglect of the other which should rightfully have received more attention. It does not follow that sight-reading and memory need be in any way mutually exclusive. Is it ever right to do two things at once? We are always doing many things at once, but only one thing can claim our full conscious attention at a time; the subconscious, however, can deal with a number of processes simultaneously. It is not wise to try and do two things of a different nature consciously at one time.

The teacher will find that he is continually being set fresh puzzles such as these to solve, affording fine practice in diagnosis and in the ability to make practical use of the theoretic knowledge he possesses. We have throughout these chapters endeavoured to bear in mind the typical difficulties which experience shows are common, and we have tried to indicate the general principles upon which these must be treated. But the variations and the details are innumerable, and no one could hope to anticipate them all, but it is in the treatment of these that the teacher gains that experience which is later to become one of his greatest assets.

APPENDIX III

SPECIMEN TEST QUESTIONS, I

1. Give a brief outline of what is understood by the Subconscious Mind, and the part it plays in teaching.

2. What is meant by Suggestion? How may it be used by the teacher (*a*) directly, and (*b*) indirectly?

3. Give an example in musical work of (*a*) subconscious working, (*b*) conscious and subconscious combined.

4. Explain (*a*) concept, (*b*) apperception mass, (*c*) reaction time, (*d*) contractility.

5. Give some reasons which indicate that the memory of the Subconscious Mind is perfect. What bearing has this upon teaching and upon practising?

6. What is understood by the Association of Ideas? In what way does the teacher make use of this?

7. Describe the method of mental memorizing apart from the instrument. Discuss its results as compared with those of the usual technical repetition method.

8. What is the difference between the Inductive and Deductive methods of teaching? Explain fully.

9. Into what main divisions do the various processes of mind fall? Write short notes on each.

10. "Good sight-readers are bad memorizers"; is this so? If so, why? Need it be so?

SPECIMEN TEST QUESTIONS, II

1. Write a short essay on Psychology and the Teacher.

2. Define Attention. What is the difference between Will-Attention and Interest-Attention?

3. Why do we make mistakes when we are tired? What are the Psychological and Physiological explanations?

4. How is originality most quickly killed? What methods would you suggest for keeping musical originality alive?

5. How would you set to work to cure "nerves" in musical performance?

6. In what ways does class teaching differ from dealing with a single pupil? Name some points to be considered in connection with discipline.

7. State what you know of Imagination and its processes. Discuss its value in musical performance and in teaching.

8. What mental benefits of general utility would you expect a pupil to derive from musical studies?

9. Plan some remedial exercises suitable for a pupil who is given to mind-wandering.

10. Distinguish between instincts and feelings; explain the relation between the feelings and an "act of will"; and show what bearing musical study has upon (*a*) intellect, and (*b*) emotions.

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The following short list of books is appended for the benefit of those requiring a working knowledge of the subjects; for the specialist there is no lack of technical books:—

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